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Major Articles

1 BK and JC Viruses in Patients with Systemic Lupus Erythematosus: Prevalent and Persistent BK Viruria, Sequence Stability of the Viral Regulatory Regions, and Nondetectable Viremia
Arnfinn Sundsfjord, Awuku Osei, Hanne Rosenqvist, Marijke Van Ghelue, Yngve Silsand, Hans-Jacob Haga, Ole Petter Rekvig, and Ugo Moens

10 Evidence for Cytokine Mediation of Disease Expression in Adults Experimentally Infected with Influenza A Virus
David P. Skoner, Deborah A. Gentile, Asha Patel, and William J. Doyle

15 Specific Vaccine Therapy in Chronic Hepatitis B: Induction of T Cell Proliferative Responses Specific for Envelope Antigens
I. Couillin, S. Pol, M. Mancini, F. Driss, C. Bréchot, P. Tiollais, and M. L. Michel

27 TT Virus Infection in Patients with Hepatitis C: Frequency, Persistence, and Sequence Heterogeneity
William L. Irving, Jonathan K. Ball, Selina Berridge, Rebecca Curran, Anna M. Grabowska, Claire L. Jameson, Keith R. Neal, Steven D. Ryder, Brian J. Thomson, and the Trent HCV Study Group

35 A Direct Comparison of the Activities of Two Humanized Respiratory Syncytial Virus Monoclonal Antibodies: MEDI-493 and RSHZI9
Syd Johnson, Sandra D. Griego, David S. Pfarr, Michael L. Doyle, Robert Woods, David Carlin, Gregory A. Prince, Scott Koenig, James F. Young, and Susan B. Dillon

41 Severe Respiratory Syncytial Virus Disease in Alaska Native Children
Ruth A. Karron, Rosalyn J. Singleton, Lisa Bulkow, Alan Parkinson, Donn Kruse, Irma DeSmet, Carol Indorf, Kenneth M. Petersen, Donna Leombruno, Debra Hurlburt, Mathuram Santosham, Lee H. Harrison, and the RSV Alaska Study Group

50 Primary Infection of Human Herpesvirus 6 in Children with Vertical Infection of Human Immunodeficiency Virus Type 1
Uraiwan Kositanont, Chantapong Wasi, Nirun Wanprapar, Piyaporn Bowonkiratikachorn, Kulkunya Chokephaibulkit, Sanay Chearskul, Kanittha Chimabutra, Ruengpung Sutthent, Suporn Foongladda, Reiko Inagi, Takeshi Kurata, and Koichi Yamanishi

56 Efficacy of Low-Dose Subcutaneous Interleukin-2 to Treat Advanced Human Immunodeficiency Virus Type 1 in Persons with ≤250/μL CD4 T Cells and Undetectable Plasma Virus Load
Albert Arnó, Lidia Ruiz, Manel Juan, Antoni Jou, Montserrat Balagué, M. Khalil Zayat, Silvia Marfil, Javier Martínez-Picado, Miguel Angel Martínez, Joan Romeu, Ricardo Pujol-Borrell, Clifford Lane, and Bonaventura Clotet

61 Thalidomide for the Treatment of Esophageal Aphthous Ulcers in Patients with Human Immunodeficiency Virus Infection
Jeffrey M. Jacobson, John Spritzler, Lawrence Fox, John L. Fahey, J. Brooks Jackson, Miriam Chernoff, David A. Wohl, Albert W. Wu, Thomas M. Hooton, Beverly E. Sha, Cecilia M. Shikuma, Laurie A. MacPhail, David M. Simpson, Carol B. Trapnell, Nesli Basgoz, and the National Institute of Allergy and Infectious Disease AIDS Clinical Trials Group

68 $CD8^+$ Anti–Human Immunodeficiency Virus Suppressor Activity (CASA) in Response to Antiretroviral Therapy: Loss of CASA Is Associated with Loss of Viremia
John Wilkinson, John J. Zaunders, Andrew Carr, and David A. Cooper

76 Functional T Cell Reconstitution and Human Immunodeficiency Virus–1–Specific Cell-Mediated Immunity during Highly Active Antiretroviral Therapy
Oscar Pontesilli, Susana Kerkhof-Garde, Daan W. Notermans, Norbert A. Foudraine, Marijke T. L. Roos, Michèl R. Klein, Sven A. Danner, Joep M. A. Lange, and Frank Miedema

87 Fever and Human Immunodeficiency Virus Infection as Sentinels for Emerging Mycobacterial and Fungal Bloodstream Infections in Hospitalized Patients ≥15 Years Old, Bangkok
Lennox K. Archibald, L. Clifford McDonald, Sunthorn Rheanpumikankit, Somsit Tansuphaswadikul, Achara Chaovanich, Boonchuay Eampokalap, Shailen N. Banerjee, L. Barth Reller, and William R. Jarvis

93 Human Immunodeficiency Virus Load in Breast Milk, Mastitis, and Mother-to-Child Transmission of Human Immunodeficiency Virus Type 1
Richard D. Semba, Newton Kumwenda, Donald R. Hoover, Taha E. Taha, Thomas C. Quinn, Laban Mtimavalye, Robert J. Biggar, Robin Broadhead, Paolo G. Miotti, Lori J. Sokoll, Len van der Hoeven, and John D. Chiphangwi

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Lennox K. Archibald, L. Clifford McDonald, Sunthorn Rheanpumikankit, Somsit Tansuphaswadikul, Achara Chaovanich, Boonchuay Eampokalap, Shailen N. Banerjee, L. Barth Reller, and William R. Jarvis

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99 Trends in Human Immunodeficiency Virus (HIV) Counseling, Testing, and Antiretroviral Treatment of HIV-Infected Women and Perinatal Transmission in North Carolina
Susan A. Fiscus, Adaora A. Adimora, Victor J. Schoenbach, Ross McKinney, Wilma Lim, David Rupar, Jean Kenny, Charles Woods, Catherine Wilfert, and Victoria A. Johnson

106 In Vivo Cytokine and Neuroendocrine Responses to Endotoxin in Human Immunodeficiency Virus–Infected Subjects
Barbara da Silva, William Singer, Ignatius W. Fong, and Clifford A. Ottaway

116 Microbiologic Findings and Correlations with Serum Tumor Necrosis Factor–α in Patients with Severe Sepsis and Septic Shock
Jonathan Cohen and Edward Abraham

122 Nasal Immunization Induces *Haemophilus influenzae*–specific Th1 and Th2 Responses with Mucosal IgA and Systemic IgG Antibodies for Protective Immunity
Yuichi Kurono, Masafumi Yamamoto, Kohtaro Fujihashi, Satoru Kodama, Masashi Suzuki, Goro Mogi, Jerry R. McGhee, and Hiroshi Kiyono

133 Correlation of Opsonophagocytosis and Passive Protection Assays Using Human Anticapsular Antibodies in an Infant Mouse Model of Bacteremia for *Streptococcus pneumoniae*
Scott E. Johnson, Lorry Rubin, Sandra Romero-Steiner, Janet K. Dykes, Lorna B. Pais, Atquia Rizvi, Edwin Ades, and George M. Carlone

141 Phenotypically Activated $\gamma\delta$ T Lymphocytes in the Peripheral Blood of Patients with Tuberculosis
Susanne I. Behr-Perst, Martin E. Munk, Tom Schaberg, Timo Ulrichs, Ralf-Joachim Schulz, and Stefan H. E. Kaufmann

150 Severity of Tuberculosis in Mice is Linked to Distal Chromosome 3 and Proximal Chromosome 9
Catharina Lavebratt, Alexander S. Apt, Boris V. Nikonenko, Martin Schalling, and Erwin Schurr

156 Evidence for $\alpha v\beta 3$ and $\alpha v\beta 5$ Integrin-like Vitronectin (VN) Receptors in *Candida albicans* and Their Involvement in Yeast Cell Adhesion to VN
Elisabetta Spreghini, Angela Gismondi, Mario Piccoli, and Giorgio Santoni

167 Longitudinal Study of *Cryptosporidium* Infection in Children in Northeastern Brazil
Robert D. Newman, Cynthia L. Sears, Sean R. Moore, James P. Nataro, Tadesse Wuhib, Deborah A. Agnew, Richard L. Guerrant, and Aldo A. M. Lima

Review

176 Review: Infectious Diseases and Coagulation Disorders
E. C. M. van Gorp, C. Suharti, H. ten Cate, W. M. V. Dolmans, J. W. M. van der Meer, J. W. ten Cate, and D. P. M. Brandjes

Concise Communications

187 Protection after Two Doses of Measles Vaccine Is Independent of Interval between Doses
Gaston De Serres, Jill Sciberras, Monika Naus, Nicole Boulianne, Bernard Duval, and Louis Rochette

191 GB Virus C Infection in Hemodialysis Patients: Molecular Evidence for Nosocomial Transmission
Jia-Horng Kao, Ching-Huai Huang, Wendy Chen, Tun-Jun Tsai, Su-Hui Lee, Kuan-Yu Hung, and Ding-Shinn Chen

195 Immunologic Parameters as Predictive Factors of Cytomegalovirus Disease in Renal Allograft Recipients
Ingvild Nordøy, Fredrik Müller, Knut P. Nordal, Halvor Rollag, Egil Lien, Pål Aukrust, and Stig S. Froland

199 The Epidemiology of Neonatal Herpes Simplex Virus Infections in California from 1985 to 1995
Kathleen M. Gutierrez, Meira S. Falkovitz Halpern, Yvonne Maldonado, and Ann M. Arvin

203 The Topical Microbicide PRO 2000 Protects against Genital Herpes Infection in a Mouse Model
Nigel Bourne, David I. Bernstein, James Ireland, Andrew J. Sonderfan, Albert T. Profy, and Lawrence R. Stanberry

206 Effect of Human Immunodeficiency Virus Type 1 on Intracellular Activation and Superoxide Production by Neutrophils
José F. Muñoz, Siham Salmen, Lisbeth R. Berrueta, Maria P. Carlos, José A. Cova, José H. Donis, Manuel R. Hernández, and José V. Torres

211 Fas Receptor Up-Regulation and Membrane Localization Concurrent with Apoptosis in Idiopathic Esophageal Ulceration: Toward a Better Understanding of Esophageal Injury in AIDS
JeanMarie Houghton, Reju M. Korah, and Kyung H. Kim

216 Protein Kinase C–Dependent Effects on Leukocyte Migration of Thalidomide
Christian Meierhofer, Stefan Dunzendorfer, and Christian J. Wiedermann

220 Rats of the Genus *Rattus* are Reservoir Hosts for Pathogenic *Bartonella* Species: An Old World Origin for a New World Disease?
B. A. Ellis, R. L. Regnery, L. Beati, F. Bacellar, M. Rood, G. G. Glass, E. Marston, T. G. Ksiazek, D. Jones, and J. E. Childs

225 Sequestration of T Lymphocytes to Body Fluids in Tuberculosis: Reversal of Anergy following Chemotherapy
Francesco Dieli, Giuseppe Friscia, Caterina Di Sano, Juraj Ivanyi, Mahavir Singh, Ralph Spallek, Guido Sireci, Lucina Titone, and Alfredo Salerno

229 Killing of *Mycobacterium avium* by Neutrophils and Monocytes from AIDS Patients Treated with Recombinant Granulocyte-Macrophage Colony-Stimulating Factor
Sandro Cinti, Michael Coffey, Amy Sullivan, and Powel Kazanjian

234 Association of *Chlamydia trachomatis* Heat-Shock Protein 60 Antibody and HLA Class II DQ Alleles
L. K. Gaur, R. W. Peeling, M. Cheang, J. Kimani, J. Bwayo, F. Plummer, and R. C. Brunham

238 *Chlamydia pneumoniae* Infection Accelerates the Progression of Atherosclerosis in Apolipoprotein E–Deficient Mice
Teresa C. Moazed, Lee Ann Campbell, Michael E. Rosenfeld, J. Thomas Grayston, and Cho-chou Kuo

Correspondence

242 No Evidence for Serosubtype-Restricted Protection among Teenagers Vaccinated with the Norwegian Group B Outer Membrane Vesicle Vaccine
Elisabeth Wedege, Hanne Nokleby, and Gunnar Bjune

242 Reply
G. R. Jones, M. Christodoulides, and J. E. Heckels

243 *Coccidioides immitis* Antigen
Demosthenes Pappagianis

245 Notices

Volume 180 • Number 2 *August 1999*

Major Articles

247 Cytomegalovirus (CMV)–Specific T Cell Immunity after Renal Transplantation Mediates Protection from CMV Disease by Limiting the Systemic Virus Load
Pierre Reusser, Gieri Cathomas, Rudolf Attenhofer, Michael Tamm, and Gilbert Thiel

254 Efficacy and Safety of the Neuraminidase Inhibitor Zanamivir in the Treatment of Influenza A and B Virus Infections
A. S. Monto, D. M. Fleming, D. Henry, R. de Groot, M. Makela, T. Klein, M. Elliott, O. N. Keene, and C. Y. Man

262 In Vivo and In Vitro Induction of MxA Protein in Peripheral Blood Mononuclear Cells from Patients Chronically Infected with Hepatitis C Virus
Mario Fernández, Juan Antonio Quiroga, Julio Martín, Monserrat Herrero, Margarita Pardo, Michel Andre Horisberger, and Vicente Carreño

268 Human Monoclonal Antibodies Isolated from Spontaneous Epstein-Barr Virus–Transformed Tumors of Hu-SPL-SCID Mice and Specific for Fusion Protein Display Broad Neutralizing Activity Toward Respiratory Syncytial Virus
Soulaima Chamat, Edward E. Walsh, Darrell Anderson, Mike Osta, Christian Awaraji, Li-Zhen Pan, James Ochi, Steve Shuey, and Peter Brams

278 Early and Persistent Human Immunodeficiency Virus Type 1 (HIV-1)–Specific T Helper Dysfunction in Blood and Lymph Nodes following Acute HIV-1 Infection
Luwy K. Musey, John N. Krieger, James P. Hughes, Timothy W. Schacker, Lawrence Corey, and M. Juliana McElrath

285 Identification of Two Distinct Subsets of Long-Term Nonprogressors with Divergent Viral Activity by Stromal-Derived Factor 1 Chemokine Gene Polymorphism Analysis
Claudia Balotta, Patrizia Bagnarelli, Stefano Corvasce, Renata Mazzucchelli, M. Chiara Colombo, Laura Papagno, Sara Santambrogio, Anna Lisa Ridolfo, Michela Violin, Alberto Berlusconi, Rossella Velleca, Guido Facchi, Mauro Moroni, Massimo Clementi, Massimo Galli, and the Resistant Host Perspective Study Group

290 A Canarypox Vaccine Expressing Multiple Human Immunodeficiency Virus Type 1 Genes Given Alone or with Rgp120 Elicits Broad and Durable $CD8^+$ Cytotoxic T Lymphocyte Responses in Seronegative Volunteers
Thomas G. Evans, Michael C. Keefer, Kent J. Weinhold, Mark Wolff, David Montefiori, Geoffrey J. Gorse, Barney S. Graham, M. Juliana McElrath, Mary Lou Clements-Mann, Mark J. Mulligan, Patricia Fast, Mary Clare Walker, Jean-Louis Excler, Ann-Marie Duliege, James Tartaglia, and the NIAID AIDS Vaccine Evaluation Group

299 Consistent Associations of HLA Class I and II and Transporter Gene Products with Progression of Human Immunodeficiency Virus Type 1 Infection in Homosexual Men
Ireneus P. M. Keet, James Tang, Michèl R. Klein, Susan LeBlanc, Cheryl Enger, Charles Rivers, Raymond J. Apple, Dean Mann, James J. Goedert, Frank Miedema, and Richard A. Kaslow

310 Cerebrospinal Fluid β Chemokine Concentrations in Neurocognitively Impaired Individuals Infected with Human Immunodeficiency Virus Type 1
Scott L. Letendre, E. Randall Lanier, and J. Allen McCutchan

320 Potent Antiretroviral Therapy of Primary Human Immunodeficiency Virus Type 1 (HIV-1) Infection: Partial Normalization of T Lymphocyte Subsets and Limited Reduction of HIV-1 DNA Despite Clearance of Plasma Viremia
John J. Zaunders, Philip H. Cunningham, Anthony D. Kelleher, Gilbert R. Kaufmann, Angel B. Jaramillo, Rowanne Wright, Don Smith, Pat Grey, Jeanette Vizzard, Andrew Carr, and David A. Cooper

330 Effect of Circumcision on Incidence of Human Immunodeficiency Virus Type 1 and Other Sexually Transmitted Diseases: A Prospective Cohort Study of Trucking Company Employees in Kenya
Ludo Lavreys, Joel P. Rakwar, Mary Lou Thompson, Denis J. Jackson, Kishorchandra Mandaliya, Bhavna H. Chohan, Job J. Bwayo, Jeckoniah O. Ndinya-Achola, and Joan K. Kreiss

337 High Rates of Transmission of Subtype E Human Immunodeficiency Virus Type 1 among Heterosexual Couples in Northern Thailand: Role of Sexually Transmitted Diseases and Immune Compromise
Kenrad E. Nelson, Kittipong Rungruengthanakit, Joseph Margolick, Vinai Suriyanon, Somchai Niyomthai, Melanie A. de Boer, Surinda Kawichai, Valerie Robison, David D. Celentano, Tippavan Nagachinta, and Ann Duerr

344 Lack of Autologous Neutralizing Antibody to Human Immunodeficiency Virus Type 1 (HIV-1) and Macrophage Tropism Are Associated with Mother-to-Infant Transmission
Janet L. Lathey, Jeff Tsou, Karen Brinker, Karen Hsia, William A. Meyer III, and Stephen A. Spector

351 The ALBI Trial: A Randomized Controlled Trial Comparing Stavudine Plus Didanosine with Zidovudine Plus Lamivudine and a Regimen Alternating Both Combinations in Previously Untreated Patients Infected with Human Immunodeficiency Virus
Jean-Michel Molina, Geneviève Chêne, Françoise Ferchal, Valérie Journot, Isabelle Pellegrin, Marie-Noëlle Sombardier, Corinne Rancinan, Laurent Cotte, Isabelle Madelaine, Thierry Debord, Jean-Marie Decazes, and ALBI (ANRS 070) Study Group

359 Changes in Frequency of HIV-1–Specific Cytotoxic T Cell Precursors and Circulating Effectors after Combination Antiretroviral Therapy in Children
Hans M. L. Spiegel, Elizabeth DeFalcon, Graham S. Ogg, Marie Larsson, Tom J. Beadle, Peter Tao, Andrew J. McMichael, Nina Bhardwaj, Chris O'Callaghan, William I. Cox, Keith Krasinski, Henry Pollack, William Borkowsky, and Douglas F. Nixon

369 Atovaquone Suspension Compared with Aerosolized Pentamidine for Prevention of *Pneumocystis carinii* Pneumonia in Human Immunodeficiency Virus–Infected Subjects Intolerant of Trimethoprim or Sulfonamides
Charles Chan, Julio Montaner, Eric-Albert Lefebvre, Gary Morey, Michael Dohn, R. Andrew McIvor, Janna Scott, Raymond Marina, and Paul Caldwell

377 Successful Treatment of Lyme Encephalopathy with Intravenous Ceftriaxone
Eric L. Logigian, Richard F. Kaplan, and Allen C. Steere

384 Effect of Parenteral Antibiotic Administration on Persistence of Vancomycin-Resistant *Enterococcus faecium* in the Mouse Gastrointestinal Tract
Curtis J. Donskey, Jennifer A. Hanrahan, Rebecca A. Hutton, and Louis B. Rice

391 Regional Dissemination of Vancomycin-Resistant Enterococci Resulting from Interfacility Transfer of Colonized Patients
William E. Trick, Matthew J. Kuehnert, Stephen B. Quirk, Matthew J. Arduino, Sonia M. Aguero, Loretta A. Carson, Bertha C. Hill, Shailen N. Banerjee, and William R. Jarvis

397 A Randomized Clinical Trial of Acellular Pertussis Vaccines in Healthy Adults: Dose-Response Comparisons of 5 Vaccines and Implications for Booster Immunization
Wendy A. Keitel, Larry R. Muenz, Michael D. Decker, Janet A. Englund, ChrisAnna M. Mink, Dean A. Blumberg, and Kathryn M. Edwards

404 Simultaneous Respiratory Tract Colonization by Multiple Strains of Nontypeable *Haemophilus influenzae* in Chronic Obstructive Pulmonary Disease: Implications for Antibiotic Therapy
Timothy F. Murphy, Sanjay Sethi, Karin L. Klingman, Angela B. Brueggemann, and Gary V. Doern

410 Invasive Group A Streptococcal Infections: T1M1 Isolates Expressing Pyrogenic Exotoxins A and B in Combination with Selective Lack of Toxin-Neutralizing Antibodies Are Associated with Increased Risk of Streptococcal Toxic Shock Syndrome
Björn K. G. Eriksson, Jan Andersson, Stig E. Holm, and Mari Norgren

419 Participation of ABH Glycoconjugates in the Secretory Response to *Escherichia coli* Heat-Labile Toxin in Rabbit Intestine
Estela M. Galván, German A. Roth, and Clara G. Monferran

426 The Effects of Three Nonoxynol-9 Preparations on Vaginal Flora and Epithelium
D. Heather Watts, Lorna Rabe, Marijane A. Krohn, Jan Aura, and Sharon L. Hillier

438 Correlation of Quantitative Bone Marrow and Blood Cultures in AIDS Patients with Disseminated *Mycobacterium avium* Complex Infection
Richard Hafner, Clark B. Inderlied, Dolores M. Peterson, David J. Wright, Harold C. Standiford, George Drusano, Katherine Muth, and Division of AIDS Treatment Research Initiative Protocol 007 Study Group

448 In Vitro and In Vivo Anticandidal Activity of Human Immunodeficiency Virus Protease Inhibitors
Antonio Cassone, Flavia De Bernardis, Antonella Torosantucci, Evelina Tacconelli, Mario Tumbarello, and Roberto Cauda

454 Control of Schistosomiasis Pathology by Combination of Sm28GST DNA Immunization and Praziquantel Treatment
Loïc Dupré, Maxime Hervé, Anne-Marie Schacht, André Capron, and Gilles Riveau

464 *Plasmodium falciparum* Isolates from Infected Pregnant Women and Children Are Associated with Distinct Adhesive and Antigenic Properties
James G. Beeson, Graham V. Brown, Malcolm E. Molyneux, Chisale Mhango, Fraction Dzinjalamala, and Stephen J. Rogerson

473 *Plasmodium falciparum*–Infected Erythrocytes and Oxidized Low-Density Lipoprotein Bind to Separate Domains of CD36
Ian Crandall, Rebecca A. Guy, Graham F. Maguire, Philip W. Connelly, and Kevin C. Kain

480 Parasite Persistence Correlates with Disease Severity and Localization in Chronic Chagas' Disease
L. Zhang and R. L. Tarleton

Concise Communications

487 Characterization of the DNA Polymerase and Thymidine Kinase Genes of Herpes Simplex Virus Isolates from AIDS Patients in whom Acyclovir and Foscarnet Therapy Sequentially Failed
Isabelle Schmit and Guy Boivin

491 Comprehensive Restriction Analysis of the UL97 Region Allows Early Detection of Ganciclovir-Resistant Human Cytomegalovirus in an Immunocompromised Child
Lothar Prix, Klaus Hamprecht, Birgit Holzhüter, Rupert Handgretinger, Thomas Klingebiel, and Gerhard Jahn

496 Polymorphism of the Interleukin-10 Gene Is Associated with Susceptibility to Epstein-Barr Virus Infection
Merja Helminen, Nina Lahdenpohja, and Mikko Hurme

500 Prevalence of Antibodies to Human Parvovirus B19 Nonstructural Protein in Persons with Various Clinical Outcomes following B19 Infection
L. P. Jones, D. D. Erdman, and L. J. Anderson

505 Case-Control Study of Risk Factors for Avian Influenza A (H5N1) Disease, Hong Kong, 1997
Anthony W. Mounts, Heston Kwong, Hector S. Izurieta, Yuk-yin Ho, Tak-kwong Au, Miranda Lee, Carolyn Buxton Bridges, Seymour W. Williams, Kwok Hang Mak, Jacqueline M. Katz, William W. Thompson, Nancy J. Cox, and Keiji Fukuda

509 The Epidemiology of Viral Hepatitis in Children in South Texas: Increased Prevalence of Hepatitis A along the Texas-Mexico Border
Charles T. Leach, Felix C. Koo, Susan G. Hilsenbeck, and Hal B. Jenson

514 Molecular Epidemiology of Childhood Astrovirus Infection in Child Care Centers
Douglas K. Mitchell, David O. Matson, Xi Jiang, Tamas Berke, Stephan S. Monroe, Michael J. Carter, Margaret M. Willcocks, and Larry K. Pickering

518 Late Increase of Serum S100 β Protein Levels in Hamsters after Oral or Intraperitoneal Infection with Scrapie
Michael Beekes, Markus Otto, Jens Wiltfang, Erik Bahn, Sigrid Poser, and Michael Baier

521 The Mumps Virus Neurovirulence Safety Test in Rhesus Monkeys: A Comparison of Mumps Virus Strains
Steven A. Rubin, Philip J. Snoy, Kathryn E. Wright, Earl G. Brown, Peter Reeve, Judy A. Beeler, and Kathryn M. Carbone

526 Plasma Human Immunodeficiency Virus RNA Below 40 Copies/mL Is Rare in Untreated Persons Even in the First Years of Infection
Jean-Jacques Lefrère, Martine Mariotti, Laurence Morand-Joubert, Micheline Thauvin, and Françoise Roudot-Thoraval

530 CD4 Lymphocyte Count as a Predictor of the Duration of Highly Active Antiretroviral Therapy–Induced Suppression of Human Immunodeficiency Virus Load
Veronica Miller, Schlomo Staszewski, Caroline Sabin, Amina Carlebach, Carsten Rottmann, Eckhart Weidmann, Holger Rabenau, Andrew Hill, Alessandro Cozzi Lepri, and Andrew N. Phillips

534 Association of Plasma Levels of Human Immunodeficiency Virus Type 1 RNA and Oropharyngeal *Candida* Colonization
Magnús Gottfredsson, Gary M. Cox, Ólafur S. Indridason, Gisele M. D. de Almeida, Alison E. Heald, and John R. Perfect

538 The Induction of Immunologic Memory after Vaccination with *Haemophilus influenzae* Type b Conjugate and Acellular Pertussis–Containing Diphtheria, Tetanus, and Pertussis Vaccine Combination
D. Goldblatt, P. Richmond, E. Millard, C. Thornton, and E. Miller

542 Increased Nitric Oxide in Infective Gastroenteritis
M. Herulf, B. Svenungsson, Å. Lagergren, T. Ljung, E. Morcos, N. P. Wiklund, J. O. N. Lundberg, and E. Weitzberg

546 Development and Distribution of Pathologic Lesions Are Related to Immune Status and Tissue Deposition of Human Granulocytic Ehrlichiosis Agent–Infected Cells in a Murine Model System
Joseph E. Bunnell, Ellen R. Trigiani, S. R. Srinivas, and J. Stephen Dumler

551 Elderly Humans Show Prolonged In Vivo Inflammatory Activity during Pneumococcal Infections
Helle Bruunsgaard, Peter Skinhoj, Jesper Qvist, and Bente Klarlund Pedersen

555 In Vitro Exchange of Fluoroquinolone Resistance Determinants between *Streptococcus pneumoniae* and Viridans Streptococci and Genomic Organization of the *parE-parC* Region in *S. mitis*
Claire Janoir, Isabelle Podglajen, Marie-Dominique Kitzis, Claire Poyart, and Laurent Gutmann

559 Effect of Immune Activation Induced by *Cryptosporidium parvum* Whole Antigen on In Vitro Human Immunodeficiency Virus Type 1 Infection
Lihua Xiao, Renu B. Lal, and Altaf A. Lal

564 Evidence that the High Incidence of Treatment Failures in Indian Kala-Azar Is Due to the Emergence of Antimony-Resistant Strains of *Leishmania donovani*
Rosalia Lira, Shyam Sundar, A. Makharia, Richard Kenney, Albert Gam, Elvira Saraiva, and David Sacks

Correspondence

568 Highly Active Antiretroviral Therapy Failure and Protease and Reverse Transcriptase Human Immunodeficiency Virus Type 1 Gene Mutations
Laura Monno, Amelia Appice, Rocco Cavaliere, Teresa Scarabaggio, and Gioacchino Angarano

570 Reply
Benjamin Young and Daniel R. Kuritzkes

571 Does High-Dose Prophylactic Acyclovir Add Benefit in Allogeneic Marrow Transplant Recipients Receiving Prophylactic or Preemptive Ganciclovir?
R. de la Cámara and J. M. Fernández-Rañada

572 Reply
Michael Boeckh, Ted Gooley, Wendy Leisenring, David Myerson, and Lawrence Corey

574 Sustained Disappearance of Hepatitis C Viremia in Patients Receiving Protease Inhibitor Treatment for Human Immunodeficiency Virus Infection
P. Fialaire, C. Payan, D. Vitour, J. M. Chennebault, J. Loison, E. Pichard, and F. Lunel

576 **Erratum**

Volume 180 • Number 3 *September 1999*

Tribute

577 David Hamilton Smith, M.D., 1932–1999: A Tribute
Richard A. Insel and Arnold L. Smith

Major Articles

579 Th2 Responses to Inactivated Influenza Virus Can Be Converted to Th1 Responses and Facilitate Recovery from Heterosubtypic Virus Infection
Thomas M. Moran, Helen Park, Ana Fernandez-Sesma, and Jerome L. Schulman

586 Nasal Cytokine and Chemokine Responses in Experimental Influenza A Virus Infection: Results of a Placebo-Controlled Trial of Intravenous Zanamivir Treatment
R. Scott Fritz, Frederick G. Hayden, David P. Calfee, Lindsey M. R. Cass, Amy W. Peng, W. Gregory Alvord, Warren Strober, and Stephen E. Straus

594 The Comparative Effects of Famciclovir and Valacyclovir on Herpes Simplex Virus Type 1 Infection, Latency, and Reactivation in Mice
Rona A. LeBlanc, Lesley Pesnicak, Matthew Godleski, and Stephen E. Straus

600 Serologic Evidence of Human Herpesvirus 8 Transmission by Homosexual but Not Heterosexual Sex
Nicola A. Smith, Caroline A. Sabin, Robin Gopal, Dimitra Bourboulia, Wendy Labbet, Chris Boshoff, David Barlow, Barbara Band, Barry S. Peters, Annemiek de Ruiter, David W. G. Brown, Robin A. Weiss, Jennifer M. Best, and Denise Whitby

607 Dual Efficacy of Lamivudine Treatment in Human Immunodeficiency Virus/Hepatitis B Virus–Coinfected Persons in a Randomized, Controlled Study (CAESAR)
Gregory J. Dore, David A. Cooper, Catherine Barrett, Li-Ean Goh, Bharat Thakrar, and Mark Atkins

614 Effect of Chemokine Receptor Mutations on Heterosexual Human Immunodeficiency Virus Transmission
Sarah F. Lockett, Alicia Alonso, Rona Wyld, Maureen P. Martin, J. Roy Robertson, Sheila M. Gore, Clifford L. S. Leen, Ray P. Brettle, David L. Yirrell, Mary Carrington, and Andrew J. Leigh Brown

621 Progressive Multifocal Leukoencephalopathy: Improved Survival of Human Immunodeficiency Virus–infected Patients in the Protease Inhibitor Era
Mark S. Dworkin, Pei-Chun T. Wan, Debra L. Hanson, and Jeffrey L. Jones

626 Preliminary Evaluation of Human Immunodeficiency Virus Type 1 (HIV-1) Immunogen in Children with HIV-1 Infection
Shizuko Sei, Susan L. Sandelli, Georgia Theofan, Silvia Ratto-Kim, Mutsuko Kumagai, Lawrence D. Loomis-Price, Josephine H. Cox, Paul Jarosinski, Claire M. Walsek, Pim Brouwers, David J. Venzon, Jing Xu, Philip A. Pizzo, Ronald B. Moss, Merlin L. Robb, and Lauren V. Wood

641 Phenotypic Analysis of Human Immunodeficiency Virus (HIV) Type 1 Cell-Mediated Immune Responses after Treatment with an HIV-1 Immunogen
Ronald B. Moss, Mark R. Wallace, Wieslawa K. Giermakowska, Erin Webb, Jay Savary, Carolyn Chamberlin-Brandt, Georgia Theofan, Roy Musil, Steven P. Richieri, Fred C. Jensen, and Dennis J. Carlo

649 Decreased Expression of ζ Molecules by T Lymphocytes Is Correlated with Disease Progression in Human Immunodeficiency Virus–Infected Persons
Minke F. Geertsma, Annelies van Wengen-Stevenhagen, Ellen M. van Dam, Karianne Risberg, Frank P. Kroon, Paul H. P. Groeneveld, and Peter H. Nibbering

659 A Randomized, Controlled Trial of Indinavir, Zidovudine, and Lamivudine in Adults with Advanced Human Immunodeficiency Virus Type 1 Infection and Prior Antiretroviral Therapy
Martin Hirsch, Roy Steigbigel, Scholomo Staszewski, John Mellors, Ernesto Scerpella, Bernard Hirschel, Joep Lange, Kathleen Squires, Sandy Rawlins, Anne Meibohm, Randi Leavitt, and Protocol 039 Study Group

666 Sex Differences in Longitudinal Human Immunodeficiency Virus Type 1 RNA Levels among Seroconverters
Timothy R. Sterling, Cynthia M. Lyles, David Vlahov, Jacquie Astemborski, Joseph B. Margolick, and Thomas C. Quinn

673 Identification of a Window Period for Susceptibility to Dual Infection with Two Distinct Human Immunodeficiency Virus Type 2 Isolates in a *Macaca nemestrina* (Pig-tailed Macaque) Model
Ron A. Otten, Dennis L. Ellenberger, Debra R. Adams, Carol A. Fridlund, Eddie Jackson, Danuta Pieniazek, and Mark A. Rayfield

685 HTLV-I/II Seroindeterminate Western Blot Reactivity in a Cohort of Patients with Neurological Disease
Samantha S. Soldan, Michael D. Graf, Allen Waziri, Alfred N. Flerlage, Susan M. Robinson, Taketo Kawanishi, Thomas P. Leist, Tanya J. Lehky, Michael C. Levin, and Steven Jacobson

695 Quantitative Effects of Valacyclovir on the Replication of Cytomegalovirus (CMV) in Persons with Advanced Human Immunodeficiency Virus Disease: Baseline CMV Load Dictates Time to Disease and Survival
V. C. Emery, C. Sabin, J. E. Feinberg, M. Grywacz, S. Knight, and P. D. Griffiths

702 Asymptomatic Primary Cytomegalovirus Infection: Virologic and Immunologic Features
Felipe Zanghellini, Suresh B. Boppana, Vincent C. Emery, Paul D. Griffiths, and Robert F. Pass

708 Prophylaxis with Respiratory Syncytial Virus F–Specific Humanized Monoclonal Antibody Delays and Moderately Suppresses the Native Antibody Response but Does Not Impair Immunity to Late Rechallenge
Randall G. Fisher, Joyce E. Johnson, Susan B. Dillon, Robert A. Parker, and Barney S. Graham

714 Vaccination with Pertussis Toxin Alters the Antibody Response to Simultaneous Respiratory Syncytial Virus Challenge
Julie E. Fischer, Teresa R. Johnson, R. Stokes Peebles, and Barney S. Graham

720 Association of Specific Subtypes of *Borrelia burgdorferi* with Hematogenous Dissemination in Early Lyme Disease
Gary P. Wormser, Dionysios Liveris, John Nowakowski, Robert B. Nadelman, L. Frank Cavaliere, Donna McKenna, Diane Holmgren, and Ira Schwartz

726 Molecular Epidemiology of Tuberculosis in the Netherlands: A Nationwide Study from 1993 through 1997
Dick van Soolingen, Martien W. Borgdorff, Petra E. W. de Haas, Maruschka M. G. G. Sebek, Jaap Veen, Mirjam Dessens, Kristin Kremer, and Jan D. A. van Embden

737 Effects on the Ciliated Epithelium of Protein D–Producing and –Nonproducing Nontypeable *Haemophilus influenzae* in Nasopharyngeal Tissue Cultures
Håkan Janson, Birgitta Carlén, Anders Cervin, Arne Forsgren, Anna Björk Magnusdottir, Sven Lindberg, and Thomas Runer

747 Immunization with Meningococcal Outer-Membrane Protein Vesicles Containing Lipooligosaccharide Protects Mice against Lethal Experimental Group B *Neisseria meningitidis* Infection and Septic Shock
Emmanuel K. Quakyi, Carl E. Frasch, Nicole Buller, and Chao-Ming Tsai

755 The Role of B/T Costimulatory Signals in the Immunopotentiating Activity of Neisserial Porin
Fiona G. Mackinnon, Yu Ho, Milan S. Blake, Francis Michon, Anil Chandraker, Mohammed H. Sayegh, and Lee M. Wetzler

762 T Lymphocyte Response to *Neisseria gonorrhoeae* Porin in Individuals with Mucosal Gonococcal Infections
Scott D. Simpson, Yu Ho, Peter A. Rice, and Lee M. Wetzler

774 Antibody Response to the Chlamydial Heat-Shock Protein 60 in an Experimental Model of Chronic Pelvic Inflammatory Disease in Monkeys (*Macaca nemestrina*)
Rosanna W. Peeling, Dorothy L. Patton, Yvonne T. Cosgrove Sweeney, Mary S. Cheang, Anne B. Lichtenwalner, Robert C. Brunham, and Walter E. Stamm

780 Cellular Oxidation of Low-Density Lipoprotein by *Chlamydia pneumoniae*
Murat V. Kalayoglu, Brian Hoerneman, David LaVerda, Sandra G. Morrison, Richard P. Morrison, and Gerald I. Byrne

791 Monoclonal Antibody–Mediated Toxicity in *Cryptococcus neoformans* Infection: Mechanism and Relationship to Antibody Isotype
Nikoletta Lendvai and Arturo Casadevall

802 Differential Susceptibility of Two Species of Macaques to Experimental Vaginal Candidiasis
Chad Steele, Marion Ratterree, and Paul L. Fidel, Jr.

811 Synergistic Effect of Interferon-γ and Mannosylated Liposome-Incorporated Doxorubicin in the Therapy of Experimental Visceral Leishmaniasis
Labanyamoy Kole, Lopamudra Das, and Pijush K. Das

Concise Communications

821 A Temporal Analysis of Acyclovir Inhibition of Induced Herpes Simplex Virus Type 1 In Vivo Reactivation in the Mouse Trigeminal Ganglia
N. M. Sawtell, David I. Bernstein, and Lawrence R. Stanberry

824 Heterogeneity of Viral IL-6 Expression in HHV-8–Associated Diseases
Jennifer S. Cannon, John Nicholas, Jan M. Orenstein, Risa B. Mann, Paul G. Murray, Philip J. Browning, Joseph A. DiGiuseppe, Ethel Cesarman, Gary S. Hayward, and Richard F. Ambinder

829 Genetic Heterogeneity of Mumps Virus in the United Kingdom: Identification of Two New Genotypes
Li Jin, Stuart Beard, and David W. G. Brown

834 Varicella-Zoster Virus–Specific Cellular Immunity in Subjects Given Acyclovir after Household Chickenpox Exposure
Takuji Kumagai, Makoto Kamada, Chiharu Igarashi, Kenji Yuri, Hidetsugu Furukawa, Shunzo Chiba, Hiroyuki Kojima, Akiko Saito, Toyo Okui, and Shoki Yano

838 High Prevalence of TT Virus Viremia in Italian Patients, Regardless of Age, Clinical Diagnosis, and Previous Interferon Treatment
Fabrizio Maggi, Claudia Fornai, Antonietta Morrica, Francesca Casula, Maria Linda Vatteroni, Santino Marchi, Pietro Ciccorossi, Lucrezia Riente, Mauro Pistello, and Mauro Bendinelli

843 A Canarypox Vector Expressing Cytomegalovirus (CMV) Glycoprotein B Primes for Antibody Responses to a Live Attenuated CMV Vaccine (Towne)
Stuart P. Adler, Stanley A. Plotkin, Eva Gonczol, Michel Cadoz, Claude Meric, Jian Ben Wang, Pierre Dellamonica, Al M. Best, John Zahradnik, Steve Pincus, Klara Berencsi, William I. Cox, and Zsofia Gyulai

847 Decrease of Cytomegalovirus Replication in Human Immunodeficiency Virus Infected–Patients after Treatment with Highly Active Antiretroviral Therapy
Cathal E. O'Sullivan, W. Lawrence Drew, Dragana J. McMullen, Richard Miner, Jeanette Y. Lee, Richard A. Kaslow, James G. Lazar, and Michael S. Saag

850 Cell-Associated HIV-1 RNA in Blood as Indicator of Virus Load in Lymph Nodes
S. Yerly, O. T. Rutschmann, M. Opravil, F. Marchal, B. Hirschel, L. Perrin, and the Swiss HIV Cohort Study

854 Reduced Prevalence of the CCR5 Δ32 Heterozygous Genotype in Human Immunodeficiency Virus–Infected Individuals with AIDS Dementia Complex
Ronald P. van Rij, Peter Portegies, Teysir Hallaby, Joep M. A. Lange, Janny Visser, Ana-Maria de Roda Husman, Angélique B. van 't Wout, and Hanneke Schuitemaker

858 Phosphoantigen-Reactive Vγ9Vδ2 T Lymphocytes Suppress In Vitro Human Immunodeficiency Virus Type 1 Replication by Cell-Released Antiviral Factors Including CC Chemokines
Fabrizio Poccia, Luca Battistini, Barbara Cipriani, Giorgio Mancino, Federico Martini, Marie Lise Gougeon, and Vittorio Colizzi

862 Cerebrospinal Fluid Human Immunodeficiency Virus Type 1 (HIV-1) Suppression and Efavirenz Drug Concentrations in HIV-1–Infected Patients Receiving Combination Therapy
K. T. Tashima, A. M. Caliendo, M. Ahmad, J. M.Gormley, W. D. Fiske, J. M. Brennan, and T. P. Flanigan

865 Phenotypic Changes in Drug Susceptibility Associated with Failure of Human Immunodeficiency Virus Type 1 (HIV-1) Triple Combination Therapy
Neil T. Parkin, Yolanda S. Lie, Nicholas Hellmann, Martin Markowitz, Sebastian Bonhoeffer, David D. Ho, and Christos J. Petropoulos

871 Human Immunodeficiency Virus (HIV)–Specific IgA and HIV Neutralizing Activity in the Serum of Exposed Seronegative Partners of HIV-Seropositive Persons
Sandra Mazzoli, Lucia Lopalco, Alessandra Salvi, Daria Trabattoni, Sergio Lo Caputo, Francesca Semplici, Mara Biasin, Claudio Blé, Antonio Cosma, Claudia Pastori, Francesca Meacci, Francesco Mazzotta, Maria Luisa Villa, Antonio G. Siccardi, and Mario Clerici

876 Risk Factors for Human T Cell Lymphotropic Virus Type II Infection among the Guaymi Indians of Panama
Elizabeth M. Maloney, Blas Armien, Fernando Gracia, Luis Castillo, Hilary Kruger, Arthur Levin, Paul H. Levine, Jonathan E. Kaplan, William A. Blattner, and Ruthann M. Giusti

880 Polymorphism of the 5′-Flanking Region of the Tumor Necrosis Factor (TNF)–α Gene and Susceptibility to Human T-Cell Lymphotropic Virus Type I (HTLV-I) Uveitis
Naoko Seki, Kazunari Yamaguchi, Akira Yamada, Shintaro Kamizono, Sunao Sugita, Chikako Taguchi, Masao Matsuoka, Hajime Matsumoto, Shinya Nishizaka, Kyogo Itoh, and Manabu Mochizuki

884 Molecular Evidence of Simian Virus 40 Infections in Children
Janet S. Butel, Amy S. Arrington, Connie Wong, John A. Lednicky, and Milton J. Finegold

888 Fcγ Receptor Polymorphisms Determine the Magnitude of In Vitro Phagocytosis of *Streptococcus pneumoniae* Mediated by Pneumococcal Conjugate Sera
Wouter T. M. Jansen, Mijke A. Breukels, Harm Snippe, Lieke A. M. Sanders, André F. M. Verheul, and Ger T. Rijkers

892 Synthesis and Preclinical Evaluation of Glycoconjugate Vaccines against Group B *Streptococcus* Types VI and VIII
Lawrence C. Paoletti, Julieanne Pinel, Kenneth D. Johnson, Barbara Reinap, Robin A. Ross, and Dennis L. Kasper

896 A Randomized Clinical Trial of Mupirocin in the Eradication of *Staphylococcus aureus* Nasal Carriage in Human Immunodeficiency Virus Disease
Jeffrey N. Martin, Francoise Perdreau-Remington, Marinka Kartalija, Omer G. Pasi, Marcy Webb, Julie L. Gerberding, Henry F. Chambers, Martin G. Täuber, and Belle L. Lee

900 The Incidence of Ehrlichial and Rickettsial Infection in Patients with Unexplained Fever and Recent History of Tick Bite in Central North Carolina
Christopher F. Carpenter, Tejal K. Gandhi, Li Kuo Kong, G. Ralph Corey, Sheng-Min Chen, David H. Walker, J. Stephen Dumler, Edward Breitschwerdt, Barbara Hegarty, and Daniel J. Sexton

904 Increased Urine Interleukin-6 Concentrations Correlate with Pyelonephritic Changes on ^{99m}Tc-Dimercaptosuccinic Acid Scans in Neonates with Urinary Tract Infections
Emmanuel Roilides, Fotis Papachristou, Elias Gioulekas, Sevasti Tsaparidou, Nicolas Karatzas, John Sotiriou, and John Tsiouris

908 Relationship of Plasma Leptin to Plasma Cytokines and Human Survival in Sepsis and Septic Shock
Francisco Arnalich, Julia López, Rosa Codoceo, Manuel Jiménez, Rosario Madero, and Carmen Montiel

912 Relationship between *Ureaplasma urealyticum* Vaginal Colonization and Polymorphism in the Interleukin-1 Receptor Antagonist Gene
Jan Jeremias, Paulo Giraldo, Shane Durrant, Ayrton Ribeiro-Filho, and Steven S. Witkin

915 Antibodies Reactive with the Cryptococcal Capsular Polysaccharide Glucuronoxylomannan Are Present in Sera from Children with and without Human Immunodeficiency Virus Infection
Jacobo Abadi and Liise-anne Pirofski

920 CCR5 Δ32 Deletion and Reduced Risk of Toxoplasmosis in Persons Infected with Human Immunodeficiency Virus Type 1
Laurence Meyer, Magda Magierowska, Jean-Baptiste Hubert, Marie-Jeanne Mayaux, Micheline Misrahi, Jérôme Le Chenadec, Patrice Debre, Christine Rouzioux, Jean-François Delfraissy, Ioannis Theodorou, and SEROCO-HEMOCO-SEROGEST Study Groups

925 *Plasmodium falciparum* Infection: Influence on Hemoglobin Levels in α-Thalassemia and Microcytosis
Frank P. Mockenhaupt, Ulrich Bienzle, Jürgen May, Adeyinka G. Falusi, Olusegun G. Ademowo, Peter E. Olumese, and Christian G. Meyer

929 Intensity of Infection in AIDS-Related Intestinal Microsporidiosis
Richard Goodgame, Charles Stager, Brian Marcantel, Eduardo Alcocer, and Ana Marie Segura

933 **Notices**

933 **Erratum**

Volume 180 • Number 4 *October 1999*

Major Articles

935 Low Incidence of Rimantadine Resistance in Field Isolates of Influenza A Viruses
Thedi Ziegler, Mark L. Hemphill, Marja-Liisa Ziegler, Gilda Perez-Oronoz, Alexander I. Klimov, Alan W. Hampson, Helen L. Regnery, and Nancy J. Cox

940 Intranasal Interleukin-12 is a Powerful Adjuvant for Protective Mucosal Immunity
Bernard P. Arulanandam, Margot O'Toole, and Dennis W. Metzger

950 Measles Virus Infection in Rhesus Macaques: Altered Immune Responses and Comparison of the Virulence of Six Different Virus Strains
Paul G. Auwaerter, Paul A. Rota, William R. Elkins, Robert J. Adams, Tracy DeLozier, Yaqing Shi, William J. Bellini, Brian R. Murphy, and Diane E. Griffin

959 Partial Nucleotide Sequencing and Molecular Evolution of Epidemic Causing Dengue 2 Strains
Urvashi B. Singh, Arindam Maitra, Shobha Broor, Arvind Rai, S. T. Pasha, and Pradeep Seth

966 Experimental Infection of the Cane Mouse *Zygodontomys brevicauda* (Family Muridae) with Guanarito Virus (Arenaviridae), the Etiologic Agent of Venezuelan Hemorrhagic Fever
Charles F. Fulhorst, Thomas G. Ksiazek, Clarence J. Peters, and Robert B. Tesh

970 A Subunit Cytomegalovirus Vaccine Based on Recombinant Envelope Glycoprotein B and a New Adjuvant
Robert F. Pass, Anne-Marie Duliegè, Suresh Boppana, Rose Sekulovich, Sandra Percell, William Britt, and Rae Lyn Burke

976 Hepatocytes are Permissive for Human Cytomegalovirus Infection in Human Liver Cell Culture and In Vivo
C. Sinzger, A. L. Bissinger, R. Viebahn, H. Oettle, C. Radke, C. A. Schmidt, and G. Jahn

987 Significance of the Anti-E2 Response in Self-Limited and Chronic Hepatitis C Virus Infections in Chimpanzees and in Humans
Alfred M. Prince, Betsy Brotman, Dong-Hun Lee, Leigh Ren, Bonnie S. Moore, and James W. Scheffel

992 Replication of Hepatitis C Virus in Ascitic Mononuclear Cells with Development of Distinct Viral Quasispecies
Chao-Wei Hsu, Chau-Ting Yeh, Peggy Guey-Chi Chen, and Yun-Fan Liaw

1001 Differential Effect of Interferon on Hepatitis C Virus 1b Quasispecies in the Nonstructural Protein 5A Gene
Ikuo Sakuma, Nobuyuki Enomoto, Masayuki Kurosaki, Namiki Izumi, Fumiaki Marumo, and Chifumi Sato

1010 Evidence for Concurrent Epidemics of Human Herpesvirus 8 and Human Immunodeficiency Virus Type 1 in US Homosexual Men: Rates, Risk Factors, and Relationship to Kaposi's Sarcoma
Thomas R. O'Brien, Dean Kedes, Don Ganem, Donald R. Macrae, Philip S. Rosenberg, Jaime Molden, and James J. Goedert

1018 Longitudinal Human Immunodeficiency Virus Type 1 Load in the Italian Seroconversion Study: Correlates and Temporal Trends of Virus Load
Cynthia M. Lyles, Maria Dorrucci, David Vlahov, Patrizio Pezzotti, Gioacchino Angarano, Alessandro Sinicco, Francesco Alberici, Timothy M. Alcorn, Stefano Vella, and Giovanni Rezza

1025 The Effect of Drug-Injection Behavior on Genetic Evolution of HIV-1
Mariangela Carneiro, Xiao-Fang Yu, Cynthia Lyles, Alan Templeton, Anton E. Weisstein, Mahboobeh Safaeian, Homayoon Farzadegan, David Vlahov, and Richard B. Markham

1033 Viral and Immunologic Examination of Human Immunodeficiency Virus Type 1–Infected, Persistently Seronegative Persons
Dennis L. Ellenberger, Patrick S. Sullivan, Jonathan Dorn, Charles Schable, Thomas J. Spira, Thomas M. Folks, and Renu B. Lal

1043 Sequence Clusters in Human Immunodeficiency Virus Type 1 Reverse Transcriptase Are Associated with Subsequent Virological Response to Antiretroviral Therapy
Andrew J. Leigh Brown, Huldrych F. Günthard, Joseph K. Wong, Richard T. D'Aquila, Victoria A. Johnson, Daniel R. Kuritzkes, and Douglas D. Richman

1050 Immune Reconstitution after 2 Years of Successful Potent Antiretroviral Therapy in Previously Untreated Human Immunodeficiency Virus Type 1–Infected Adults
Daan W. Notermans, Nadine G. Pakker, Dörte Hamann, Norbert A. Foudraine, Robert H. Kauffmann, Pieter L. Meenhorst, Jaap Goudsmit, Marijke T. L. Roos, Peter T. A. Schellekens, Frank Miedema, and Sven A. Danner

1057 Restoration of Normal Interleukin-2 Production by $CD4^+$ T Cells of Human Immunodeficiency Virus–Infected Patients after 9 Months of Highly Active Antiretroviral Therapy
Laurence Weiss, Petronela Ancuta, Pierre-Marie Girard, Hicham Bouhlal, Anne Roux, Nicole Haeffner Cavaillon, and Michel D. Kazatchkine

1064 The Safety and Efficacy of Granulocyte-Macrophage Colony-Stimulating Factor (Sargramostim) Added to Indinavir- or Ritonavir-Based Antiretroviral Therapy: A Randomized Double-Blind, Placebo-Controlled Trial
Gail Skowron, Daniel Stein, George Drusano, Kathleen Melbourne, John Bilello, Dennis Mikolich, Khurram Rana, Jan M. Agosti, Anne Mongillo, James Whitmore, and Mark J. Gilbert

1072 Polyspecific Self-Reactive Antibodies in Individuals Infected with Human Immunodeficiency Virus Facilitate T Cell Deletion and Inhibit Costimulatory Accessory Cell Function
Zhi-qin Wang, Harold W. Horowitz, Thorsten Orlikowsky, Beom-Ik Hahn, Valia Trejo, Abhijit S. Bapat, Robert. S. Mittler, Ravi J. Rayanade, Soo Young Yang, and Michael K. Hoffmann

1080 Immunization with Envelope MN rgp120 Vaccine in Human Immunodeficiency Virus–Infected Pregnant Women
Peter F. Wright, John S. Lambert, Geoffrey J. Gorse, Ray-Hahn Hsieh, M. Julianna McElrath, Kent Weinhold, Diane W. Wara, Edwin L. Anderson, Michael C. Keefer, Susan Jackson, Lois J. Wagner, Donald P. Francis, Patricia E. Fast, and James McNamara

1089 Prospective Evaluation of Amplification-Boosted ELISA for Heat-Denatured p24 Antigen for Diagnosis and Monitoring of Pediatric Human Immunodeficiency Virus Type 1 Infection
David Nadal, Jürg Böni, Christian Kind, Oliviero E. Varnier, Felicitas Steiner, Zuzana Tomasik, and Jörg Schüpbach

1096 Chemokine Receptor Polymorphisms and Human Immunodeficiency Virus Disease Progression
Philippa J. Easterbrook, Tim Rostron, Natalie Ives, Maxine Troop, Brian G. Gazzard, and Sarah L. Rowland-Jones

1106 Adaptation to Promiscuous Usage of Chemokine Receptors Is Not a Prerequisite for Human Immunodeficiency Virus Type 1 Disease Progression
Ana-Maria de Roda Husman, Ronald P. van Rij, Hetty Blaak, Silvia Broersen, and Hanneke Schuitemaker

1116 Lower Human Immunodeficiency Virus (HIV) Type 2 Viral Load Reflects the Difference in Pathogenicity of HIV-1 and HIV-2
Stephen J. Popper, Abdoulaye Dieng Sarr, Karin U. Travers, Aissatou Guèye-Ndiaye, Souleymane Mboup, Myron E. Essex, and Phyllis J. Kanki

1122 Efficient Human Immunodeficiency Virus (HIV)-1 Gag-Env Pseudovirion Formation Elicited from Mammalian Cells by a Canarypox HIV Vaccine Candidate
Zhi-Yu Fang, Irina Kuli-Zade, and Paul Spearman

1133 Decline of Simian Immunodeficiency Virus (SIV)–Specific Cytotoxic T Lymphocytes in the Peripheral Blood of Long-Term Nonprogressing Macaques Infected with SIVmac32H-J5
Anna-Maria Geretti, Ellen G. J. Hulskotte, Marlinda E. M. Dings, Carel A. van Baalen, Geert van Amerongen, Stephen G. Norley, Patrick Boers, Rob Gruters, and Albert D. M. E. Osterhaus

1142 Involvement of Matrix Metalloproteinases in Human Immunodeficiency Virus Type 1–Induced Replication by Clinical *Mycobacterium avium* Isolates
Charlene S. Dezzutti, W. Edward Swords, Patricia C. Guenthner, Donna R. Sasso, Larry M. Wahl, Alan H. Drummond, Gale W. Newman, C. Harold King, Frederick D. Quinn, and Renu B. Lal

1153 Decreased Point Prevalence of *Haemophilus influenzae* Type b (Hib) Oropharyngeal Colonization by Mass Immunization of Brazilian Children Less Than 5 Years Old with Hib Polyribosylribitol Phosphate Polysaccharide–Tetanus Toxoid Conjugate Vaccine in Combination with Diphtheria-Tetanus Toxoids–Pertussis Vaccine
E. Forleo-Neto, C. F. de Oliveira, E. M. C. P. Maluf, C. Bataglin, J. M. R. Araujo, L. F. Kunz, Jr., A. K. Pustai, V. S. D. Vieira, R. C. Zanella, M. C. Brandileone, L. M. J. Mimica, and I. M. Mimica

1159 Incident Syphilis among Women with Multiple Admissions to Jail in New York City
S. Blank, M. Sternberg, L. L. Neylans, S. R. Rubin, I. B. Weisfuse, and M. E. St. Louis

1164 Role of Peroxynitrite as a Mediator of Pathophysiological Alterations in Experimental Pneumococcal Meningitis
S. Kastenbauer, U. Koedel, and H. W. Pfister

1171 Immunogenicity and Impact on Nasopharyngeal Carriage of a Nonavalent Pneumococcal Conjugate Vaccine
Nontombi Mbelle, Robin E. Huebner, Avril D. Wasas, Alan Kimura, Ih Chang, and Keith P. Klugman

1177 A Cluster of VanD Vancomycin-Resistant *Enterococcus faecium:* Molecular Characterization and Clinical Epidemiology
Belinda E. Ostrowsky, Nancye C. Clark, Claudie Thauvin-Eliopoulos, Lata Venkataraman, Matthew H. Samore, Fred C. Tenover, George M. Eliopoulos, Robert C. Moellering, Jr., and Howard S. Gold

1186 Suppression of Acquired Immunity against *Listeria monocytogenes* by Amphotericin B–Mediated Inhibition of CD8 T Cell Function
Gernot Geginat, Marianne Kretschmar, Simon Walter, Dieter Junker, Herbert Hof, and Thomas Nichterlein

1195 Modulation of Intracellular Growth of *Listeria monocytogenes* in Human Enterocyte Caco-2 Cells by Interferon-γ and Interleukin-6: Role of Nitric Oxide and Cooperation with Antibiotics
Youssef Ouadrhiri, Yves Sibille, and Paul M. Tulkens

1205 Interaction of Shiga Toxins with Human Brain Microvascular Endothelial Cells: Cytokines as Sensitizing Agents
Belakere Ramegowda, James E. Samuel, and Vernon L. Tesh

1214 An Increase in Sporadic and Outbreak-Associated *Salmonella* Enteritidis Infections in Wisconsin: The Role of Eggs
Mary Jo Trepka, John R. Archer, Sean F. Altekruse, Mary E. Proctor, and Jeffrey P. Davis

1220 Neutrophil Recruitment and Resistance to Urinary Tract Infection
Masashi Haraoka, Long Hang, Björn Frendéus, Gabriela Godaly, Marie Burdick, Robert Strieter, and Catharina Svanborg

1230 Interleukin 10 Produced by Macrophages Inoculated with *Mycobacterium avium* Attenuates Mycobacteria-Induced Apoptosis by Reduction of TNF-α Activity
M. Katarzyna Balcewicz-Sablinska, HuiXian Gan, and H. G. Remold

1238 Analysis of Rate of Change of IS*6110* RFLP Patterns of *Mycobacterium tuberculosis* Based on Serial Patient Isolates
Annette S. de Boer, Martien W. Borgdorff, Petra E. W. de Haas, Nico J. D. Nagelkerke, Jan D. A. van Embden, and Dick van Soolingen

1245 Complex Transmission Dynamics of Clonally Related Virulent *Mycobacterium tuberculosis* Associated with Barhopping by Predominantly Human Immunodeficiency Virus–Positive Gay Men
Afshin Yaganehdoost, Edward A. Graviss, Michael W. Ross, Gerald J. Adams, Srinivas Ramaswamy, Audrey Wanger, Richard Frothingham, Hanna Soini, and James M. Musser

1252 The Effect of Doxycycline Treatment on the Development of Protective Immunity in a Murine Model of Chlamydial Genital Infection
Hua Su, Richard Morrison, Ronald Messer, William Whitmire, Scott Hughes, and Harlan D. Caldwell

1259 Amphotericin B–Induced Interleukin-1β Expression in Human Monocytic Cells is Calcium and Calmodulin Dependent
P. David Rogers, Robert E. Kramer, Stanley W. Chapman, and John D. Cleary

1267 Proteases from *Aspergillus fumigatus* Induce Interleukin (IL)–6 and IL-8 Production in Airway Epithelial Cell Lines by Transcriptional Mechanisms
P. Borger, G. H. Koëter, J. A. B. Timmerman, E. Vellenga, J. F. C. Tomee, and H. F. Kauffman

1275 Virulence of Three Distinct *Cryptosporidium parvum* Isolates for Healthy Adults
Pablo C. Okhuysen, Cynthia L. Chappell, Joseph H. Crabb, Charles R. Sterling, and Herbert L. DuPont

1282 Randomized Dose-Ranging Study of the Safety and Efficacy of WR 238605 (Tafenoquine) in the Prevention of Relapse of *Plasmodium vivax* Malaria in Thailand
Douglas S. Walsh, Sornchai Looareesuwan, Polrat Wilairatana, D. Gray Heppner, Jr., Douglas B. Tang, Thomas G. Brewer, Watcharee Chokejindachai, Parnpen Viriyavejakul, Dennis E. Kyle, Wilbur K. Milhous, Brian G. Schuster, John Horton, David J. Braitman, and Ralf P. Brueckner

1288 The Prognostic and Pathophysiologic Role of Pro- and Antiinflammatory Cytokines in Severe Malaria
Nicholas P. J. Day, Tran Tinh Hien, Tineke Schollaardt, Pham Phu Loc, Ly Van Chuong, Tran Thi Hong Chau, Nguyen Thi Hoang Mai, Nguyen Hoan Phu, Dinh Xuan Sinh, Nicholas J. White, and May Ho

1298 Susceptibility to Periportal (Symmers) Fibrosis in Human *Schistosoma mansoni* Infections: Evidence That Intensity and Duration of Infection, Gender, and Inherited Factors Are Critical in Disease Progression
Qurashi Mohamed-Ali, Nasr-Eldin M. A. Elwali, Ahmed A. Abdelhameed, Adil Mergani, Siddig Rahoud, Kamal E. Elagib, Osman K. Saeed, Laurent Abel, Mubarak M. A. Magzoub, and Alain J. Dessein

1307 A Recombinant 10-kDa Protein of *Taenia solium* Metacestodes Specific to Active Neurocysticercosis
Joon-Yong Chung, Young Yil Bahk, Sun Huh, Shin-Yong Kang, Yoon Kong, and Seung-Yull Cho

Concise Communications

1316 Use of a Hybrid Capture Assay of Self-Collected Vaginal Swabs in Rural Uganda for Detection of Human Papillomavirus
David Serwadda, Maria J. Wawer, Keerti V. Shah, Nelson K. Sewankambo, Richard Daniel, Chuanjun Li, Attila Lorincz, Mary P. Meehan, Fred Wabwire-Mangen, and Ronald H. Gray

1320 Prenatal Diagnostic and Prognostic Value of Human Cytomegalovirus Load and IgM Antibody Response in Blood of Congenitally Infected Fetuses
Maria Grazia Revello, Maurizio Zavattoni, Antonella Sarasini, Fausto Baldanti, Cinzia De Julio, Luciana De-Giuli, Umberto Nicolini, and Giuseppe Gerna

1324 Passive IgA Monoclonal Antibody Is No More Effective Than IgG at Protecting Mice from Mucosal Challenge with Respiratory Syncytial Virus
Randall G. Fisher, James E. Crowe, Jr., Teresa R. Johnson, Yi-Wei Tang, and Barney S. Graham

1328 Conformational Epitopes Detected by Cross-Reactive Antibodies to Envelope 2 Glycoprotein of the Hepatitis C Virus
Isao Nakano, Yoshihide Fukuda, Yoshiaki Katano, and Tetsuo Hayakawa

1334 Hepatitis G Virus and Human Immunodeficiency Virus Coinfection: Response to Interferon-α Therapy
Daryl T.-Y. Lau, Kirk D. Miller, Jill Detmer, Janice Kolberg, Betsey Herpin, Julia A. Metcalf, Richard T. Davey, and Jay H. Hoofnagle

1338 Antibody-Dependent Cellular Cytotoxicity Independently Predicts Survival in Severely Immunocompromised Human Immunodeficiency Virus–Infected Patients
Donald N. Forthal, Gary Landucci, Richard Haubrich, Bobi Keenan, Baruch D. Kuppermann, Jeremiah G. Tilles, and Jonathan Kaplan

1342 Highly Active Antiretroviral Treatment Initiated Early in the Course of Symptomatic Primary HIV-1 Infection: Results of the ANRS 053 Trial
Bruno Hoen, Béatrice Dumon, Martine Harzic, Alain Venet, Béatrice Dubeaux, Caroline Lascoux, Yazid Bourezane, Jean-Marie Ragnaud, Alain Bicart-See, François Raffi, Laurianne Beauvais, Hervé Fleury, and Daniel Séréni

1347 Suppression of Plasma Virus Load below the Detection Limit of a Human Immunodeficiency Virus Kit Is Associated with Longer Virologic Response than Suppression below the Limit of Quantitation
J. M. Raboud, S. Rae, R. S. Hogg, B. Yip, C. H. Sherlock, P. R. Harrigan, M. V. O'Shaughnessy, and J. S. G. Montaner

1351 Systemic and Mucosal Immunity Is Elicited after Both Intramuscular and Intravaginal Delivery of Human Immunodeficiency Virus Type 1 DNA Plasmid Vaccines to Pregnant Chimpanzees
Mark L. Bagarazzi, Jean D. Boyer, M. Ali Javadian, Michael A. Chattergoon, Ami R. Shah, Adam D. Cohen, Mosi K. Bennett, Richard B. Ciccarelli, Kenneth E. Ugen, and David B. Weiner

1356 The Effect of Age and Natural Priming on the IgG and IgA Subclass Responses after Parenteral Influenza Vaccination
Abdullah S. El-Madhun, Rebecca J. Cox, and Lars R. Haaheim

1361 An Outbreak of *Salmonella* Serogroup Saphra Due to Cantaloupes from Mexico
Janet C. Mohle-Boetani, Roshan Reporter, S. Benson Werner, Sharon Abbott, Jeff Farrar, Stephen H. Waterman, and Duc J. Vugia

1365 Cross-Reactive Antibodies Prevent the Lethal Effects of *Staphylococcus aureus* Superantigens
Sina Bavari, Robert G. Ulrich, and Ross D. LeClaire

1370 Protection against *Staphylococcus aureus* Sepsis by Vaccination with Recombinant Staphylococcal Enterotoxin A Devoid of Superantigenicity
Ing-Marie Nilsson, Margareta Verdrengh, Robert G. Ulrich, Sina Bavari, and Andrzej Tarkowski

1374 Induction of Glomerular Lesions in the Kidneys of Mice Infected with Vero Toxin–Producing *Escherichia coli* by Lipopolysaccharide Injection
Keiko Shimizu, , Kazuo Tanaka, Akira Akatsuka, Masayuki Endoh, and Yasuhiro Koga

1378 Virulence Characteristics of *Escherichia coli* in Acute Bacterial Prostatitis
Kenji Mitsumori, Akito Terai, Shingo Yamamoto, Satoshi Ishitoya, and Osamu Yoshida

1382 Chancroid, Primary Syphilis, Genital Herpes, and Lymphogranuloma Venereum in Antananarivo, Madagascar
Frieda M.-T. Behets, Jocelyne Andriamiadana, Daudet Randrianasolo, René Randriamanga, Désiré Rasamilalao, Cheng-Yen Chen, Judith B. Weiss, Stephen A. Morse, Gina Dallabetta, and Myron S. Cohen

1386 Absence of Kaposi's Sarcoma–Associated Herpesvirus DNA in Bacillary Angiomatosis-Peliosis Lesions
David A. Relman, David N. Fredricks, Kristine E. Yoder, Ginat Mirowski, Timothy Berger, and Jane E. Koehler

1390 Avidity Maturation of Antibody to *Haemophilus influenzae* Type b (Hib) after Immunization with Diphtheria-Tetanus–Acellular Pertussis–Hib–Hepatitis B Combined Vaccine in Infants
Michael E. Pichichero, Timothy Voloshen, Diane Zajac, and Sherry Passador

1394 Eotaxin Expression in *Onchocerca volvulus*–Induced Dermatitis after Topical Application of Diethylcarbamazine
Eric Pearlman, Laurent Toé, Boakye A. Boatin, Adjami Aimé Gilles, Alan W. Higgins, and Thomas R. Unnasch

1398 *trans*-Sialidase from *Trypanosoma cruzi* Induces Apoptosis in Cells from the Immune System In Vivo
M. Susana Leguizamón, Esteban Mocetti, Hernan Garcia Rivello, Pablo Argibay, and Oscar Campetella

1403 Long-Term Suppression of *Mansonella streptocerca* Microfilariae after Treatment with Ivermectin
Peter Fischer, Ephraim Tukesiga, and Dietrich W. Büttner

Correspondence

1406 Cytotoxic T Lymphocyte Precursors in Persons with Repeated Exposure to Human Immunodeficiency Virus
Donald N. Forthal

1406 Reply
M. Juliana McElrath

1407 Paternal and Maternal Infection Status and *Helicobacter pylori* in Their Children
Francesco Luzza and Francesco Pallone

1407 Reply
Dietrich Rothenbacher, Guenter Bode, Gabriele Berg, Ute Knayer, Theodor Gonser, Guido Adler, and Hermann Brenner

1408 Modulation of the Pro- and Antiinflammatory Cytokines by Amphotericin B
Alieke G. Vonk, Mihai G. Netea, Jos W. M. van der Meer, and Bart Jan Kullberg

1410 Reply
P. David Rogers, John K. Jenkins, Stanley W. Chapman, and John D. Cleary

1411 Influence of Hepatitis C Virus (HCV) Genotype, HCV RNA Load, and Alanine Aminotransferase Level on Reduction of HCV RNA after a Single Administration of Interferon-α
Guido Antonelli, Elisabetta Riva, Fabrizio Maggi, Maria Linda Vatteroni, and Eleonora Simeoni

1412 Cryptococcosis and Smoking: The Potential Role of Iron
Johan R. Boelaert and Elisabetta Blasi

Volume 180 • Number 5 *November 1999*

Major Articles

1415 Epidemiology of Acquisition and Clearance of Cervical Human Papillomavirus Infection in Women from a High-Risk Area for Cervical Cancer
Eduardo L. Franco, Luisa L. Villa, João P. Sobrinho, José M. Prado, Marie-Claude Rousseau, Marie Désy, and Thomas E. Rohan

1424 Seroreactivity to Human Papillomavirus Types 16, 18, 31, and 45 Virus-Like Particles in a Case-Control Study of Cervical Squamous Intraepithelial Lesions
L. Wideroff, M. Schiffman, P. Haderer, A. Armstrong, C. E. Greer, M. M. Manos, R. D. Burk, D. R. Scott, M. E. Sherman, J. T. Schiller, R. N. Hoover, R. E. Tarone, and R. Kirnbauer

1429 Early CD69 Expression on Peripheral Blood Lymphocytes from Children with Dengue Hemorrhagic Fever
Sharone Green, Sathit Pichyangkul, David W. Vaughn, Siripen Kalayanarooj, Suchitra Nimmannitya, Ananda Nisalak, Ichiro Kurane, Alan L. Rothman, and Francis A. Ennis

1436 O'nyong-nyong Fever in South-Central Uganda, 1996–1997: Description of the Epidemic and Results of a Household-Based Seroprevalence Survey
Eduard J. Sanders, Elly B. Rwaguma, Jun Kawamata, Noah Kiwanuka, J. Julius Lutwama, Freddie P. Ssengooba, Margaret Lamunu, Robinah Najjemba, Willy A. Were, George Bagambisa, and Grant L. Campbell

1444 Prevalence and Significance of Naturally Occurring Mutations in the Surface and Polymerase Genes of Hepatitis B Virus
Yuki Ogura, Masayuki Kurosaki, Yasuhiro Asahina, Nobuyuki Enomoto, Fumiaki Marumo, and Chifumi Sato

1452 Associations between Cellular Immune Effector Function, Iron Metabolism, and Disease Activity in Patients with Chronic Hepatitis C Virus Infection
Günter Weiss, Florian Umlauft, Martina Urbanek, Manfred Herold, Mark Lovevsky, Felix Offner, and Victor R. Gordeuk

1459 Prevalence and Incidence of Herpes Simplex Virus Type 2 Infection among Male Zimbabwean Factory Workers
William McFarland, Lovemore Gwanzura, Mary T. Bassett, Rhoderick Machekano, Ahmed S. Latif, Catherine Ley, Julie Parsonnet, Rae Lyn Burke, and David Katzenstein

1466 Molecular Polymorphism of Kaposi's Sarcoma–Associated Herpesvirus (Human Herpesvirus 8) Latent Nuclear Antigen: Evidence for a Large Repertoire of Viral Genotypes and Dual Infection with Different Viral Genotypes
Shou-Jiang Gao, Yan-Jin Zhang, Jian-Hong Deng, Charles S. Rabkin, Ornella Flore, and Hal B. Jenson

1477 Human Interleukin-12 Enhances Interferon-γ–Producing Influenza-Specific Memory $CD8^+$ Cytotoxic T Lymphocytes
Innocent N. Mbawuike, Kohtaro Fujihashi, Simonetta DiFabio, Shigetada Kawabata, Jerry R. McGhee, Robert B. Couch, and Hiroshi Kiyono

1487 Quantitative Proviral DNA and Antibody Levels in the Natural History of HTLV-I Infection
Angela Manns, Wendell J. Miley, Rainford J. Wilks, Owen St. C. Morgan, Barrie Hanchard, Gilian Wharfe, Beverly Cranston, Elizabeth Maloney, Seth L. Welles, William A. Blattner, and David Waters

1494 Co-receptor Usage of BOB/GPR15 in Addition to CCR5 Has No Significant Effect on Replication of Simian Immunodeficiency Virus In Vivo
Stefan Pöhlmann, Nicole Stolte, Jan Münch, Peter Ten Haaft, Jonathan L. Heeney, Christiane Stahl-Hennig, and Frank Kirchhoff

1503 Progressive Expansion of an L-Selectin–Negative CD8 Cell with Anti–Feline Immunodeficiency Virus (FIV) Suppressor Function in the Circulation of FIV-Infected Cats
Douglas H. Gebhard, Janet L. Dow, Tedd A. Childers, Jose I. Alvelo, Mary B. Tompkins, and Wayne A. F. Tompkins

1514 Evaluation of Human Immunodeficiency Virus (HIV) Type 1 Load, CD4 T Cell Level, and Clinical Class as Time-Fixed and Time-Varying Markers of Disease Progression in HIV-1–Infected Children
Leslie A. Kalish, Kenneth McIntosh, Jennifer S. Read, Clemente Diaz, Sheldon H. Landesman, Jane Pitt, Kenneth C. Rich, William T. Shearer, Katherine Davenny, and Judy F. Lew

1521 Variants of the Human *NRAMP1* Gene and Altered Human Immunodeficiency Virus Infection Susceptibility
Sandrine Marquet, Fabio O. Sánchez, Mauricio Arias, Jaime Rodriguez, Sara C. Paris, Emil Skamene, Erwin Schurr, and Luis F. García

1526 Quantitative and Qualitative Differences in the Serum Antibody Profiles of Human Immunodeficiency Virus–Infected Persons with and without *Cryptococcus neoformans* Meningitis
R. Fleuridor, R. H. Lyles, and L. Pirofski

1536 Pharmacokinetics of Didanosine in Antepartum and Postpartum Human Immunodeficiency Virus–Infected Pregnant Women and Their Neonates: An AIDS Clinical Trials Group Study
Yi Wang, Elizabeth Livingston, Shivakumar Patil, Ross E. McKinney, Arlene D. Bardeguez, Jorge Gandia, Mary J. O'Sullivan, Pamela Clax, Sharon Huang, and Jashvant D. Unadkat

1542 Neutrophils from Patients with Advanced Human Immunodeficiency Virus Infection Have Impaired Complement Receptor Function and Preserved Fcγ Receptor Function
Claudia Monari, Arturo Casadevall, Donatella Pietrella, Francesco Bistoni, and Anna Vecchiarelli

1550 Neutrophil A_{2A} Adenosine Receptor Inhibits Inflammation in a Rat Model of Meningitis: Synergy with the Type IV Phosphodiesterase Inhibitor, Rolipram
Gail W. Sullivan, Joel Linden, Bradley L. Buster, and W. Michael Scheld

1561 Influence of In Vitro Susceptibility Phenotype against Thrombin-Induced Platelet Microbicidal Protein on Treatment and Prophylaxis Outcomes of Experimental *Staphylococcus aureus* Endocarditis
V. K. Dhawan, M. R. Yeaman, and A. S. Bayer

1569 Immunity to Cross-Reactive Serotypes Induced by Pneumococcal Conjugate Vaccines in Infants
Xinhong Yu, Barry Gray, Swei-ju Chang, Joel I. Ward, Kathryn M. Edwards, and Moon H. Nahm

1577 Characterization of a Multidrug-Resistant Clone of Invasive *Streptococcus pneumoniae* Serotype 6B in Alaska by Using Pulsed-Field Gel Electrophoresis and PspA Serotyping
Karen M. Rudolph, Marilyn J. Crain, Alan J. Parkinson, and Marilyn C. Roberts

1584 Relationship between Plasma Levels of Lipopolysaccharide (LPS) and LPS-Binding Protein in Patients with Severe Sepsis and Septic Shock
Steven M. Opal, Patrick J. Scannon, Jean-Louis Vincent, Mark White, Stephen F. Carroll, John E. Palardy, Nicolas A. Parejo, John P. Pribble, and Jon H. Lemke

1590 Colonic Epithelial Physiology Is Altered in Response to the Bacterial Superantigen *Yersinia pseudotuberculosis* Mitogen
G. A. E. Donnelly, J. Lu, T. Takeda, and D. M. McKay

1597 Cefotaxime, Desacetyl-Cefotaxime, and Bactericidal Activity in Spontaneous Bacterial Peritonitis
David Dalmau, Gilles Pomier Layrargues, Daphna Fenyves, Bernard Willems, Fernand Turgeon, and Pierre Turgeon

1603 Neutrophil Chemotaxis on Silicone and Polyurethane Surfaces
Amy S. Indorf, Tim Poate, and Robert J. Sherertz

1608 Transmission of a Multidrug-Resistant *Mycobacterium tuberculosis* Strain Resembling "Strain W" among Noninstitutionalized, Human Immunodeficiency Virus–Seronegative Patients
Annelies van Rie, Robin M. Warren, Nulda Beyers, Robert P. Gie, Collette N. Classen, Madalene Richardson, Samantha L. Sampson, Thomas C. Victor, and Paul D. van Helden

1616 Mycobacterium-Induced Transmesothelial Migration of Monocytes into Pleural Space: Role of Intercellular Adhesion Molecule–1 in Tuberculous Pleurisy
Najmunnisa Nasreen, Kamal A. Mohammed, Melissa J. Ward, and Veena B. Antony

1624 High Prevalence and Incidence of Sexually Transmitted Diseases in Urban Adolescent Females Despite Moderate Risk Behaviors
Rebecca E. Bunnell, Linda Dahlberg, Robert Rolfs, Raymond Ransom, Kenneth Gershman, Carol Farshy, Wilbert J. Newhall, Scott Schmid, Katherine Stone, and Michael St. Louis

1632 Correlation of Behaviors with Microbiological Changes in Vaginal Flora
Jane R. Schwebke, Charity M. Richey, and Heidi L. Weiss

1637 Enhanced Sensitivity of Tumor Necrosis Factor/Lymphotoxin-α–Deficient Mice to *Cryptococcus neoformans* Infection despite Increased Levels of Nitrite/Nitrate, Interferon-γ, and Interleukin-12
Naïma Rayhane, Olivier Lortholary, Catherine Fitting, Jacques Callebert, Michel Huerre, Françoise Dromer, and Jean-Marc Cavaillon

1648 Fas-FasL Interactions Modulate Host Defense against Systemic *Candida albicans* Infection
Mihai G. Netea, Jos W. M. van der Meer, Jacques F. G. M. Meis, and Bart Jan Kullberg

1656 Potent Induction of Focused Th1-Type Cellular and Humoral Immune Responses by RTS,S/SBAS2, a Recombinant *Plasmodium falciparum* Malaria Vaccine
Ajit Lalvani, Phillipe Moris, Gerald Voss, Ansar A. Pathan, Kent E. Kester, Roger Brookes, Edwin Lee, Marguerite Koutsoukos, Magdalena Plebanski, Martine Delchambre, Katie L. Flanagan, Cecile Carton, Moncef Slaoui, Christian Van Hoecke, W. Ripley Ballou, Adrian V. S. Hill, and Joe Cohen

1665 Familial Resemblance in Humoral Immune Response to Defined and Crude *Schistosoma mansoni* Antigens in an Endemic Area in Brazil
J. Bethony, A. M. S. Silveira, L. F. Alves-Oliveira, A. Thakur, G. Gazzinelli, R. Correa-Oliveira, and P. T. LoVerde

1674 Antibody-Dependent Reductions in Mouse Hookworm Burden after Vaccination with *Ancylostoma caninum* Secreted Protein 1
Kashinath Ghosh and Peter J. Hotez

Concise Communications

1682 Human Herpesvirus 8 Cellular Immune Responses in Homosexual Men
Howard D. Strickler, James J. Goedert, F. R. Bethke, C. M. Trubey, Thomas R. O'Brien, Joel Palefsky, James E. Whitman, Dharam Ablashi, Steven Zeichner, and Gene M. Shearer

1686 Molecular Characterization of a Nosocomial Outbreak of Human Respiratory Syncytial Virus on an Adult Leukemia/Lymphoma Ward
Tony Mazzulli, Teresa C. T. Peret, Allison McGeer, Darlene Cann, Kelly S. MacDonald, Robert Chua, Dean D. Erdman, and Larry J. Anderson

1690 Quantification of JC Virus DNA in the Cerebrospinal Fluid of Patients with Human Immunodeficiency Virus–Associated Progressive Multifocal Leukoencephalopathy—A Longitudinal Study
Christian Eggers, Hans-Jürgen Stellbrink, Thomas Buhk, and Kristina Dörries

1695 Borna Disease Virus in Human Brains with a Rare Form of Hippocampal Degeneration but Not in Brains of Patients with Common Neuropsychiatric Disorders
Martin Czygan, Wiebke Hallensleben, Markus Hofer, Stefan Pollak, Christian Sauder, Thomas Bilzer, Ingmar Blümcke, Peter Riederer, Bernhard Bogerts, Peter Falkai, Markus J. Schwarz, Eliezer Masliah, Peter Staeheli, Frank T. Hufert, and Klaus Lieb

1700 Effects of Antigen Dose and Immunization Regimens on Antibody Responses to a Cytomegalovirus Glycoprotein B Subunit Vaccine
Sharon E. Frey, Christopher Harrison, Robert F. Pass, Ellen Yang, Daniel Boken, Rose E. Sekulovich, Sandra Percell, Allen E. Izu, Sue Hirabayashi, Rae Lyn Burke, and Anne-Marie Duliège

1704 Intrahepatic Expression of Interleukin-1β and Tumor Necrosis Factor–α in Chronic Hepatitis C
Franz Ludwig Dumoulin, Ludger Leifeld, Ulrike Honecker, Tilman Sauerbruch, and Ulrich Spengler

1709 Effect of Small Bowel Bacterial Overgrowth on the Immunogenicity of Single-Dose Live Oral Cholera Vaccine CVD 103-HgR
Rosanna Lagos, Alessio Fasano, Steven S. Wasserman, Valeria Prado, Oriana San Martin, Paulina Abrego, Genevieve A. Losonsky, Silvia Alegria, and Myron M. Levine

1713 Effect of Nitric Oxide on *Helicobacter pylori* Morphology
S. P. Cole, V. F. Kharitonov, and D. G. Guiney

1718 Tumor Necrosis Factor–α and Interleukin-1α Decrease the Adherence of *Streptococcus pyogenes* to Cultured Keratinocytes
Gary L. Darmstadt, Philip Fleckman, and Craig E. Rubens

1722 YKL-40, a Matrix Protein of Specific Granules in Neutrophils, Is Elevated in Serum of Patients with Community-Acquired Pneumonia Requiring Hospitalization
Claudia Nordenbaek, Julia S. Johansen, Peter Junker, Niels Borregaard, Ole Sørensen, and Paul A. Price

1727 Identification of *Trichomonas vaginalis* α-Actinin as the Most Common Immunogen Recognized by Sera of Women Exposed to the Parasite
Maria Filippa Addis, Paola Rappelli, Ana Maria Pinto de Andrade, Fatima Madeira Rita, Mauro Maria Colombo, Piero Cappuccinelli, and Pier Luigi Fiori

1731 Down-Regulation of Th1 Type of Response in Early Human American Cutaneous Leishmaniasis
Paulo Novis Rocha, Roque P. Almeida, Olivia Bacellar, Amélia R. de Jesus, Dalmo Correia Filho, Álvaro Cruz Filho, Aldina Barral, Robert L. Coffman, and Edgar M. Carvalho

1735 Randomized, Double-Blind Study of Stibogluconate Plus Human Granulocyte Macrophage Colony-Stimulating Factor versus Stibogluconate Alone in the Treatment of Cutaneous Leishmaniasis
Roque Almeida, Argemiro D'Oliveira Jr., Paulo Machado, Olivia Bacellar, Albert I. Ko, Amelia R. de Jesus, Niloufar Mobashery, Jussamara Brito Santos, and Edgar M. Carvalho

1738 Chloroquine-Resistant *Plasmodium falciparum* Cerebral Malaria in a Chloroquine-Susceptible Area
Abdulrahman A. Alrajhi, Inam Rahim, Mustafa Akood, and Mohammed Hazmi

1742 Cytokine Expression in the Brain in Human Cerebral Malaria
Heidi Brown, Gareth Turner, Stephen Rogerson, Madalitso Tembo, James Mwenechanya, Malcolm Molyneux, and Terrie Taylor

Correspondence

1747 Neutralizing Antibody Response against Human Cytomegalovirus in Allogeneic Bone Marrow–Transplant Recipients
Antonio Volpi, Francesca Pica, Giuseppe Gentile, Angela Capobianchi, Marzia Fraschetti, and Pietro Martino

1748 Reply
Konrad Schoppel, Christian Schmidt, Hermann Einsele, Holger Hebart, and Michael Mach

1748 TT Virus—Part of the Normal Human Flora?
P. Simmonds, L. E. Prescott, C. Logue, F. Davidson, A. E. Thomas, and C. A. Ludlam

1750 Reply
A. Scott Muerhoff, Thomas P. Leary, Suresh M. Desai, and Isa K. Mushahwar

1750 Influence of Primers on the Detection of TT Virus DNA by Polymerase Chain Reaction
Keiichi Itoh, Masaharu Takahashi, Masato Ukita, Tsutomu Nishizawa, and Hiroaki Okamoto

1751 Mutations in Genes Associated with Drug Resistance in *Mycobacterium tuberculosis* Isolates from Italy
James M. Musser, Amol Amin, and Srinivas Ramaswamy

1752 Reply
Antonella Cingolani, Andrea Antinori, and Luigi Ortona

1753 The Cytokine Balance in Severe Malarial Anemia
Jorgen A. L. Kurtzhals, Bartholomew D. Akanmori, Bamenla Quarm Goka, Victoria Adabayeri, Francis K. Nkrumah, Charlotte Behr, and Lars Hviid

1754 Reply
Caroline Othoro and Venkatachalam Udhayakumar

1756 **Errata**

Volume 180 • Number 6 *December 1999*

Major Articles

1757 Quantitation of Hepatitis B Viremia and Emergence of YMDD Variants in Patients with Chronic Hepatitis B Treated with Lamivudine
Josée Gauthier, Eric J. Bourne, Michael W. Lutz, Lynn M. Crowther, Jules L. Dienstag, Nathaniel A. Brown, and Lynn D. Condreay

1763 Antibody Response in Individuals Infected with Avian Influenza A (H5N1) Viruses and Detection of Anti-H5 Antibody among Household and Social Contacts
Jacqueline M. Katz, Wilina Lim, C. Buxton Bridges, Thomas Rowe, Jean Hu-Primmer, Xiuhua Lu, Robert A. Abernathy, Matthew Clarke, Laura Conn, Heston Kwong, Miranda Lee, Gareth Au, Y. Y. Ho, K. H. Mak, Nancy J. Cox, and Keiji Fukuda

1771 Outbreak of Viral Gastroenteritis Due to Drinking Water Contaminated by Norwalk-like Viruses
Marja Kukkula, Leena Maunula, Esa Silvennoinen, and Carl-Henrik von Bonsdorff

1777 Evidence among Blood Donors for a 30-Year-Old Epidemic of Human T Lymphotropic Virus Type II Infection in the United States
Edward L. Murphy, Kevin Watanabe, Catharie C. Nass, Helen Ownby, Alan Williams, and George Nemo

1784 Zoster Incidence in Human Immunodeficiency Virus–Infected Hemophiliacs and Homosexual Men, 1984–1997
Eric A. Engels, Philip S. Rosenberg, Robert J. Biggar, the District of Columbia Gay Cohort Study, and the Multicenter Hemophilia Cohort Study

1790 Long-Term Nonprogressive Infection with Human Immunodeficiency Virus Type 1 in a Hemophilia Cohort
Thomas C. Greenough, Doreen B. Brettler, Frank Kirchhoff, Louis Alexander, Ronald C. Desrosiers, Stephen J. O'Brien, Mohan Somasundaran, Katherine Luzuriaga, and John L. Sullivan

1803 Association between the Rate of $CD4^+$ T Cell Decrease and the Year of Human Immunodeficiency Virus (HIV) Type 1 Seroconversion among Persons Enrolled in the Swiss HIV Cohort Study
Philippe Vanhems, Jean Lambert, Marta Guerra, Bernard Hirschel, Robert Allard, and Swiss HIV Cohort Study

1809 Emergence of Trimethoprim-Sulfamethoxazole Resistance in the AIDS Era
Jeffrey N. Martin, David A. Rose, W. Keith Hadley, Francoise Perdreau-Remington, Phung K. Lam, and Julie L. Gerberding

1819 Treatment with Granulocyte Colony–Stimulating Factor Decreases the Capacity of Hematopoietic Progenitor Cells for Generation of Lymphocytes in Human Immunodeficiency Virus–Infected Persons
Susanne D. Nielsen, Dawn R. Clark, Marianne Hutchings, Sanne Dam-Larsen, Sjoerd Repping, Jens O. Nielsen, Lars Mathiesen, Frank Miedema, and John-Erik S. Hansen

1827 Treatment of Human Immunodeficiency Virus Infection with Hydroxyurea, Didanosine, and a Protease Inhibitor before Seroconversion Is Associated with Normalized Immune Parameters and Limited Viral Reservoir
Franco Lori, Heiko Jessen, Judy Lieberman, Diana Finzi, Eric Rosenberg, Carmine Tinelli, Bruce Walker, Robert F. Siliciano, and Julianna Lisziewicz

1833 The Effect of Increasing α_1-Acid Glycoprotein Concentration on the Antiviral Efficacy of Human Immunodeficiency Virus Protease Inhibitors
Xing-Quan Zhang, Robert T. Schooley, and John G. Gerber

1838 Virus Levels in Untreated African Infants Infected with Human Immunodeficiency Virus Type 1
Robert J. Biggar, Michelle Janes, Richard Pilon, Paolo Miotti, Taha E. T. Taha, Robin Broadhead, Laban Mtimivalye, Newton Kumwenda and Sharon Cassol

1844 Systemic Pharmacokinetics and Cellular Pharmacology of Zidovudine in Human Immunodeficiency Virus Type 1–Infected Women and Newborn Infants
John H. Rodman, Patricia M. Flynn, Brian Robbins, Eleanor Jimenez, Arlene D. Bardeguez, Jose F. Rodriguez, Suzette Blanchard, and Arnold Fridland

1851 Evaluation of Distinct Blood Lymphocyte Populations in Human Immunodeficiency Virus Type 1–Infected Subjects in the Absence or Presence of Effective Therapy
Cynthia A. Derdeyn, J. Michael Kilby, G. Diego Miralles, Li-Fang Li, Greg Sfakianos, Michael S. Saag, Richard D. Hockett, and R. Pat Bucy

1863 Vaginal Lactobacilli, Microbial Flora, and Risk of Human Immunodeficiency Virus Type 1 and Sexually Transmitted Disease Acquisition
Harold L. Martin, Barbra A. Richardson, Patrick M. Nyange, Ludo Lavreys, Sharon L. Hillier, Bhavna Chohan, Kishorchandra Mandaliya, J. O. Ndinya-Achola, Job Bwayo, and Joan Kreiss

1869 Kawasaki Disease: A Maturational Defect in Immune Responsiveness
T. W. Kuijpers, A. Wiegman, R. A. W. van Lier, M. T. L. Roos, P. M. E. Wertheim-van Dillen, S. Pinedo, J. Ottenkamp, and the Holland/Flevoland Kawasaki Disease Study Group

1878 Elevated Plasma Concentrations of Interferon (IFN)–γ and the IFN-γ–Inducing Cytokines Interleukin (IL)–18, IL-12, and IL-15 in Severe Melioidosis
Fanny N. Lauw, Andrew J. H. Simpson, Jan M. Prins, Michael D. Smith, Masashi Kurimoto, Sander J. H. van Deventer, Peter Speelman, Wipada Chaowagul, Nicholas J. White, and Tom van der Poll

1886 A Randomized, Double-Blind, Placebo-Controlled Trial of Single-Dose Ciprofloxacin versus Erythromycin for the Treatment of Chancroid in Nairobi, Kenya
Isaac M. Malonza, Mark W. Tyndall, Jeckoniah O. Ndinya-Achola, Ian Maclean, Siad Omar, Kelly S. MacDonald, Jos Perriens, Karina Orle, Francis A. Plummer, Allan R. Ronald, and Stephen Moses

1894 The Changing Epidemiology of Meningococcal Disease in the United States, 1992–1996
Nancy E. Rosenstein, Bradley A. Perkins, David S. Stephens, Lewis Lefkowitz, Matthew L. Cartter, Richard Danila, Paul Cieslak, Kathleen A. Shutt, Tanja Popovic, Anne Schuchat, Lee H. Harrison, Arthur L. Reingold, and the Active Bacterial Core Surveillance Team

1902 Shiga Toxins Induce Apoptosis in Pulmonary Epithelium–Derived Cells
Hiroshi Uchida, Nobutaka Kiyokawa, Tomoko Taguchi, Hiroshi Horie, Junichiro Fujimoto, and Tae Takeda

1912 *Staphylococcus aureus* Infection of Mouse or Human Osteoblasts Induces High Levels of Interleukin-6 and Interleukin-12 Production
Kenneth L. Bost, Warren K. Ramp, Natalie C. Nicholson, Jennifer L. Bento, Ian Marriott, and Michael C. Hudson

1921 Variable Susceptibility to Opsonophagocytosis of Group A Streptococcus M-1 Strains by Human Immune Sera
A. Villaseñor-Sierra, W. M. McShan, D. Salmi, E. L. Kaplan, D. R. Johnson, and D. L. Stevens

1929 Erythrocyte-Aggregating Relapsing Fever Spirochete *Borrelia crocidurae* Induces Formation of Microemboli
Alireza Shamaei-Tousi, Pierre Martin, Anders Bergh, Nils Burman, Thomas Brännström, and Sven Bergström

1939 A Novel Surfactant Nanoemulsion with Broad-Spectrum Sporicidal Activity against *Bacillus* Species
Tarek Hamouda, Michael M. Hayes, Zhengyi Cao, Richard Tonda, Kent Johnson, D. Craig Wright, Joan Brisker, and James R. Baker

1950 The Identification of Vaginal *Lactobacillus* Species and the Demographic and Microbiologic Characteristics of Women Colonized by These Species
May A. D. Antonio, Stephen E. Hawes, and Sharon L. Hillier

1957 Interleukin-4 Causes Susceptibility to Invasive Pulmonary Aspergillosis through Suppression of Protective Type I Responses
Elio Cenci, Antonella Mencacci, Giuseppe Del Sero, Angela Bacci, Claudia Montagnoli, Cristiana Fè d'Ostiani, Paolo Mosci, Martin Bachmann, Francesco Bistoni, Manfred Kopf, and Luigina Romani

1969 *Pneumocystis carinii* Dihydropteroate Synthase but Not Dihydrofolate Reductase Gene Mutations Correlate with Prior Trimethoprim-Sulfamethoxazole or Dapsone Use
Liang Ma, Luciana Borio, Henry Masur, and Joseph A. Kovacs

1979 Chloroquine Resistance in *Plasmodium falciparum* and Polymorphism of the *CG2* Gene
Leonardo K. Basco and Pascal Ringwald

1987 Malaria and Pregnancy: Placental Cytokine Expression and Its Relationship to Intrauterine Growth Retardation
Ann M. Moormann, Amy D. Sullivan, Rosemary A. Rochford, Stephen W. Chensue, Paul J. Bock, Thomas Nyirenda, and Steven R. Meshnick

1994 Nitric Oxide Synthase Type 2 Promoter Polymorphisms, Nitric Oxide Production, and Disease Severity in Tanzanian Children with Malaria
Marc C. Levesque, Maurine R. Hobbs, Nicholas M. Anstey, Trisha N. Vaughn, Jennifer A. Chancellor, Ann Pole, Douglas J. Perkins, Mary A. Misukonis, Stephen J. Chanock, Donald L. Granger, and J. Brice Weinberg

2003 Waterborne Outbreak of Intestinal Microsporidiosis in Persons with and without Human Immunodeficiency Virus Infection
Laurent Cotte, Meja Rabodonirina, François Chapuis, François Bailly, François Bissuel, Cyril Raynal, Patrick Gelas, Florence Persat, Marie-Antoinette Piens, and Christian Trepo

Concise Communications

2009 Surfactant Protein A Binds to the Fusion Glycoprotein of Respiratory Syncytial Virus and Neutralizes Virion Infectivity
Reena Ghildyal, Carol Hartley, Annalisa Varrasso, Jayesh Meanger, Dennis R. Voelker, E. Margot Anders, and John Mills

2014 Immunogenicity and Safety of Hepatitis A Vaccine in Liver and Renal Transplant Recipients
Klaus Stark, Matthias Günther, Ruth Neuhaus, Petra Reinke, Karsten Schröder, Stefan Linnig, and Ulrich Bienzle

2018 Interference of Antibody Production to Hepatitis B Surface Antigen in a Combination Hepatitis A/Hepatitis B Vaccine
Sharon Frey, Ron Dagan, Yaffa Ashur, Xiao Q. Chen, Jose Ibarra, Herwig Kollaritsch, Mark H. Mazur, Gregory A. Poland, Keith Reisinger, Emmanuel Walter, Pierre Van Damme, Jean H. Braconier, Ingrid Uhnoo, Martin Wahl, Mark M. Blatter, Dennis Clements, David Greenberg, Robert M. Jacobson, S. Ragnar Norrby, Mina Rowe, Daniel Shouval, Sue S. Simmons, Jan van Hattum, Solveig Wennerholm, Jacqueline O'Brien Gress, Ivan Chan, and Barbara Kuter

2023 Granulocyte Macrophage Colony–Stimulating Factor as an Adjuvant for Hepatitis B Vaccination of Healthy Adults
Muhammad S. Hasan, Jan M. Agosti, Kara K. Reynolds, Esther Tanzman, John J. Treanor, and Thomas G. Evans

2027 Increase in Hepatitis C Virus Load in Hemophiliacs during Treatment with Highly Active Antiretroviral Therapy
Margaret V. Ragni and Franklin A. Bontempo

2030 High Levels of Viremia in Patients with the Hantavirus Pulmonary Syndrome
Masanori Terajima, John D. Hendershot, Hiroaki Kariwa, Frederick T. Koster, Brian Hjelle, Diane Goade, Matthew C. DeFronzo, and Francis A. Ennis

2035 Reactivation of Human Herpesvirus 6 during Pregnancy
Helena Dahl, Gustav Fjaertoft, Torgny Norsted, Fu-Zhang Wang, Mehrdad Mousavi-Jazi, and Annika Linde

2039 Nucleoside Analogues Achieve High Concentrations in Seminal Plasma: Relationship between Drug Concentration and Virus Burden
Arlene S. Pereira, Angela D. M. Kashuba, Susan A. Fiscus, James E. Hall, Richard R. Tidwell, Luigi Troiani, John A. Dunn, Joseph J. Eron, Jr., and Myron S. Cohen

2044 Circulating Autoantibodies to Erythropoietin Are Associated with Human Immunodeficiency Virus Type 1–Related Anemia
Nikolaos V. Sipsas, Styliani I. Kokori, John P. A. Ioannidis, Despina Kyriaki, Athanasios G. Tzioufas, and Theodore Kordossis

2048 Primary Cultures of Human Endothelial Cells Are Susceptible to Low Doses of Shiga Toxins and Undergo Apoptosis
Tomoaki Yoshida, Masako Fukada, Naoki Koide, Hiroshi Ikeda, Tsuyoshi Sugiyama, Yutaka Kato, Naohisa Ishikawa, and Takashi Yokochi

2053 Improved Detection of Enterotoxigenic *Escherichia coli* among Patients with Travelers' Diarrhea, by Use of the Polymerase Chain Reaction Technique
Juan-Pablo Caeiro, M. Teresa Estrada-Garcia, Zhi-Dong Jiang, John J. Mathewson, Javier A. Adachi, Robert Steffen, and Herbert L. DuPont

2056 Lack of Prophylactic Efficacy of an Enteric-Coated Bovine Hyperimmune Milk Product against Enterotoxigenic *Escherichia coli* Challenge Administered during a Standard Meal
Carol O. Tacket, Genevieve Losonsky, Sofie Livio, Robert Edelman, Joseph Crabb, and Daniel Freedman

2060 Identification of *Treponema pallidum* Subspecies *pallidum* in a 200-Year-Old Skeletal Specimen
Connie J. Kolman, Arturo Centurion-Lara, Sheila A. Lukehart, Douglas W. Owsley, and Noreen Tuross

2064 Heterogeneous *Helicobacter pylori* Isolates from *H. pylori*–Infected Couples in Taiwan
Chun-Hsien Kuo, Sek-Kwong Poon, Yi-Chun Su, Reu Su, Chi-Sen Chang, and Wen-Ching Wang

2069 Depressed T-Cell Interferon-γ Responses in Pulmonary Tuberculosis: Analysis of Underlying Mechanisms and Modulation with Therapy
Christina S. Hirsch, Zahra Toossi, Catherine Othieno, John L Johnson, Stephan K. Schwander, Steven Robertson, Robert S. Wallis, Kay Edmonds, Alphonse Okwera, Roy Mugerwa, Pierre Peters, and Jerrold J. Ellner

2074 *Chlamydia pneumoniae* DNA Detection in Peripheral Blood Mononuclear Cells Is Predictive of Vascular Infection
Francesco Blasi, Jens Boman, Gloria Esposito, Germano Melissano, Roberto Chiesa, Roberto Cosentini, Paolo Tarsia, Yamume Tshomba, Monia Betti, Marinella Alessi, Nicoletta Morelli, and Luigi Allegra

2077 In Vivo Efficacy of Mefloquine for the Treatment of Falciparum Malaria in Brazil
Crispim Cerutti, Jr., Rui Rafael Durlacher, Filomena E. C. de Alencar, Aluísio A. C. Segurado, and Lorrin W. Pang

2081 Genetic Characterization of an Epidemic of *Plasmodium falciparum* Malaria among Yanomami Amerindians
K. F. Laserson, I. Petralanda, R. Almera, R. H. Barker, Jr., A. Spielman, J. H. Maguire, and D. F. Wirth

2086 *Encephalitozoon cuniculi* Strain III Is a Cause of Encephalitozoonosis in Both Humans and Dogs
K. Snowden, K. Logan, and E. S. Didier

Correspondence

2089 Why Are Typhoid Vaccines Not Recommended for Epidemic Typhoid Fever?
David N. Taylor, Myron M. Levine, Lianne Kuppens, and Bernard Ivanoff

2091 **Erratum**

2092 **Reviewers of Volume 180**

2096 **Index to Volume 180**

Volume Contents